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OFFICIAL ORGAN OF THE NORTHWEST FRUIT GROWERS ASSOCIATION

VOLUME THREE

NUMBER EIGHT

DOLLAR A YEAR

# BETTER FRUIT

*February 1909*



AN EXHIBIT MADE BY ONE OF THE FRUIT DISTRICTS OF SPOKANE COUNTY AT NATIONAL APPLE SHOW, SPOKANE  
The National Apple Show was a big success. It was the largest exhibition of Apples ever before made under one roof, fifteen carloads amounting to 10,000 boxes of apples being on exhibition. The attendance was 102,000

PUBLISHED BY BETTER FRUIT PUBLISHING COMPANY, HOOD RIVER, OREGON



## These Apples grew in the WHITE SALMON VALLEY



*Opposite Hood River*

Soil, climate & location especially adapted for high grade fruit & berries. Send for our *Book* descriptive of this beautiful valley

### A SPLENDID PROPERTY

No. 102—25 acres 4 miles east of White Salmon and 1 1/4 miles from a boat landing on the Columbia river. This tract has a gentle slope to the east, and every acre is first-class fruit land with a deep, rich red shot soil. 10 acres have been slashed and burned and is ready to clear. The balance is willow, hazel, vine maple and wild cherry brush land. The view from this tract up and down the Columbia is magnificent. The possibilities of this tract for a home and commercial orchard are hard to surpass, and the price is only \$75 per acre. This is a splendid property at a bargain.

## White Salmon Land Co.

VAN VORST & WELLS, Managers, Successors to J. C. McInnes

WHITE SALMON, WASHINGTON

## Where is **ARCADIA** Located?

Twenty-two miles north of Spokane, on the Spokane Falls & Northern Railroad—  
Where the soil is particularly adapted to growing winter apples.  
Where there is an abundance of water from a gravity flow ditch.



ORCHARD ADJOINING ARCADIA

Where the shipping facilities are second to none in the entire Northwest.  
Where you can remain in your present position while we grow a producing apple orchard for you and pay real estate taxes, etc.  
Where you can buy tracts from two and a half acres up.  
Where you can make the smallest cash-down terms and smallest monthly payments.  
Where the closest investigation is solicited.

Investigate this before buying elsewhere. If you are interested write for illustrated booklet, it costs nothing

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Incorporated

312-13-14 American Bank Building  
SEATTLE, WASHINGTON

IONATHANS NEWTOWNS

## THE LAND OF OPPORTUNITY



*A three-year-old Spitzenberg apple tree at White Salmon*

Located across the Columbia River from Hood River, Oregon, the White Salmon Valley offers the greatest opportunities of any land on earth to fruit growers. Where apples, cherries, pears, peaches, prunes and straw berries grow to perfection. A few dollars invested in fruit land today will return to you in a very few years sixty-fold. The soil, climate, water and scenery are unsurpassed by that of any country. Build a home where you can enjoy peace and plenty the remainder of your life. Fruit lands cleared, planted and cared for until in a bearing condition. Write us for descriptive matter and prices.

## Estes Realty & Investment Co.

WHITE SALMON, WASHINGTON

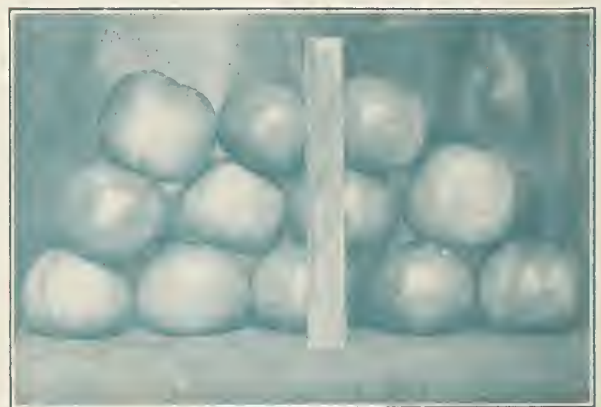
SPITZENBERGS WINESAPS

Apples  
Plums  
Pears  
Peaches

Berries  
Cherries  
Strawberries  
Nuts

## KLICKITAT

*The land where the rain and the sunshine meet*



KLICKITAT APPLES

Klickitat County is midway between the rainy coast region and the semi-arid interior. 1800 square miles of territory, extensive timber belt, fine fruit lands, rich grain sections, good grazing regions. Pure water, rich valleys, healthful climate. Long growing season, good transportation. **CHEAP LANDS**

For Booklet Address Department B

## Klickitat Development League

GOLDENDALE, WASHINGTON

# LIME-SULPHUR SPRAY

**NIAGARA** is the brand which has been so successfully used at Hood River, Medford, Yakima, Wenatchee, Walla Walla, Spokane and in the various other fruit districts of Oregon, Washington, Idaho and British Columbia. *Niagara* is a perfect lime-sulphur solution, clear and free from sediment. Every barrel branded with tested strength, contains all the strength of the lime and sulphur in its most active form.

## NIAGARA LIME & SULPHUR SOLUTION

is the best of all winter sprays and is meeting with approval as a summer spray to check apple and pear scab in many sections. Leading fruit growers are adopting the policy of spraying well with lime and sulphur at least once a year whether there be any particular pest to combat or not. The general tonic effect is worth all the trouble and expense. Its control of San Jose Scale is beyond question.

General Distributors of Niagara Lime-Sulphur Spray are: Portland Seed Co., Spokane; Western Hardware & Implement Co., Lewiston; Yakima Hardware Co., North Yakima; Zillah Fruit Growers' Association, Toppenish; Yakima Valley Fruit & Produce Growers' Association, Granger; Stevens County Fruit Growers' Union, Meyers Falls; British Columbia Fruit Growers' Association; Lane County Fruit Growers' Association, Eugene; Seattle Seed Co., Seattle; A. E. Crosby, Druggist, The Dalles; Malheur Mercantile Co., Ontario.

PREPARED BY

**Hood River Spray Mfg. Co.**   **Medford Spray Factory**   **Oregon Spray & Gas Co.**  
Hood River                      Medford                      Portland

# Fruit Grower and Shipper

*If You Want Good Results, Consign Your Shipments to*

## THE GREAT CENTRAL MARKET—CHICAGO

Which is not only one of the largest consuming markets in the United States, but being the greatest railroad center in the world is, therefore, the most important diverting point for all Western and Northwestern shippers.

If you desire experienced and capable marketing agents to properly distribute and sell your fruit, either in Chicago or other markets, wherever best prices can be realized, write or wire us. Will always quote you conservatively.

N. G. Gibson, the head of this company, and W. C. Michael, our general Western representative, were two of the first fruit dealers to commence shipping and marketing Northwestern fruit in the Eastern markets. Our long experience and wide acquaintance with the buying trade all over the United States place us in an exceptionally strong position to secure you best results on what you have to market.

We make a specialty of selling f. o. b. entransit, or delivered, whichever way will bring highest net results to the shipper. We give all fruit that has to be sold at auction our personal attention. We also handle export shipments, our foreign representatives being the best and most reliable dealers in the principal foreign markets.

We refer you to The First National Bank, Chicago; Produce Reporter Company; their Weekly Credit Sheet of June 20th, 1908.

## GIBSON FRUIT COMPANY

141 SOUTH WATER STREET, CORNER CLARK

CHICAGO



Live facts in a lively way. Live facts for men and women. Facts that affect you—your family

## Hood River Valley APPLE LANDS

Are paying from \$400 to \$700 an acre to their owners. Many started in a small way, today they are independent. You can begin today. It pays to see us

*He who investigates for himself becomes  
"the man who knows"*

**W. J. BAKER & CO.**  
Hood River, Oregon

Benton County booth won first premium at  
Oregon State Fair in 1907.

## CORVALLIS OREGON

County seat of Benton County, in the heart of the famous Willamette Valley. Greatest dairy land on earth; county produces finest mohair grown; land unsurpassed for fruit, peaches, prunes and apples in particular. The best farm lands cheaper than at any place in the valley; no inflated values. Corvallis has a population of 5,000; 125 residences constructed since January 1, 1908. Oregon Agricultural College, 1156 students, located here. Purest mountain water, sewerage, electric lights, steady, healthy growth. Opportunities here worth YOUR while. Write Corvallis Commercial Club for particulars.

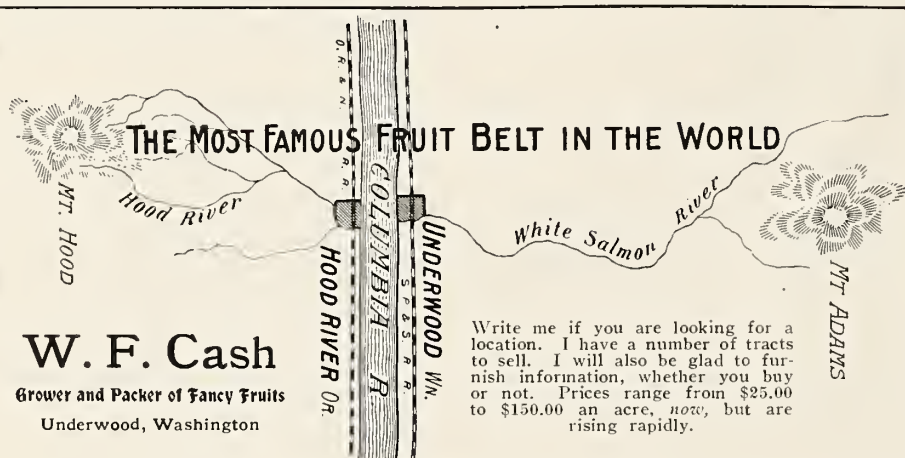
## North Yakima

*Principal City in the Yakima Valley*

Centrally located in one of the finest fruit regions of the State. Excellent home town. Headquarters for sale of bearing orchards and thirty thousand acres orchard land under new government canal. For information address

## COMMERCIAL CLUB

NORTH YAKIMA, WASHINGTON



**THE MOST FAMOUS FRUIT BELT IN THE WORLD**

**W. F. Cash**  
Grower and Packer of Fancy Fruits  
Underwood, Washington

Write me if you are looking for a location. I have a number of tracts to sell. I will also be glad to furnish information, whether you buy or not. Prices range from \$25.00 to \$150.00 an acre, now, but are rising rapidly.

## Irrigation is King

The Spokane Canal Company  
Owners of **Otis Orchards**

have one of the best and most attractive propositions to offer in the Northwest. Only twelve miles from Spokane. This district is particularly adapted to the growing of Jonathan, Wagners, Rome Beauties, Winesaps and Spitzenbergs.

FOR FULL INFORMATION WRITE

**E. G. TAYLOR & CO.**  
509 Fernwell Bldg., Spokane, Wash.

For Bargains in the Famous

## WHITE SALMON VALLEY

GO TO **R. FIELD & CO.**

*R. FIELD, Manager*

*Pioneer Real Estate Dealers*

WHITE SALMON, WASHINGTON

Have for sale all kinds of property, including fruit, dairy, timber and city property. Low prices and easy terms. All property guaranteed as represented. We can supply your every want. See our list before buying. We can save you money

The finest station on the Spokane, Portland & Seattle railway line is being built at

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The North Coast railway has a big crew building its grade through KENNEWICK. The Open River Association is building two new first-class steamboats to ply on the Columbia River from Celilo to KENNEWICK. *WHY?* Because strawberries are ripe the first week in May; bring \$10 a crate and are all shipped. Because alfalfa fields are cut four times each season, and furnish the first new hay. Because the markets of Montana, Idaho and the Coast want the first fruits and KENNEWICK produces them.

**C. A. Lundy & Co.**

*Dealers in Real Estate Opportunities*  
Kennewick, Washington

## THE DALLES, OREGON

*"The Cherry City"*

**B**EAUTIFULLY located on the Scenic Columbia River just east of the Cascade Range of Mountains, where apples, pears, peaches, cherries and apricots are grown to perfection without irrigation. Choice fruit land in small tracts offered at \$50 to \$150 per acre on easy terms. Address

**THE DALLES BUSINESS MEN'S ASSOCIATION**

## HUDSON LAND CO.

The Dalles, Oregon

## Fruit, Wheat and Stock Farms

For sale in Eastern Oregon and Washington. Acre tracts in any quantity desired, with or without trees planted, within one mile of city. We are sole agents for the sale of five and ten-acre tracts in Peachland Park, which we can sell you on easy installments and care for the orchard until it is in full bearing. This is a beautiful tract of land situate one mile west and overlooking the city. The soil is a rich, deep, sandy loam, and is set out on the most approved methods to peaches and cherries. Some of the trees are three years old. Write to us for full particulars.

## English Walnuts

AND

## Royal Ann Cherries

We are the largest owners and planters of walnuts in Oregon. Our properties are in Yamhill County, the Walnut County. We sell planted five acre tracts \$100 cash and \$15 per month with four years' care

**The Churchill-Matthews Co.**

Incorporated

110 Second Street, PORTLAND, OREGON

## THE HOOD RIVER LAND EMPORIUM

HOOD RIVER, OREGON

POSSESSES

CLIMATE—A desirable medium between the drier eastern and the more moist western conditions of the Northwest.

SOIL—Volcanic ash, rich in phosphates, and recognized as the best in the world for apples and strawberries.

Makes a specialty of real estate, conveying, loans and surveying. The president, John Leland Henderson, is a practicing lawyer residing in Hood River, and has been identified with the Hood River Valley for thirty years.

## L A N D

## OF BIG, RED APPLES

WE ALWAYS HAVE SOME  
CHOICE TRACTS TO OFFER

At popular prices and sell them strictly on their merits. Years of study given to Hood River and its products. Can sell you intelligently. Call on or address

**Geo. D. Culbertson & Co.**

Leading Land Agents Hood River, Oregon

## MOSIER APPLE LAND

in the Hood River district. Ten and twenty tracts at prices within reach of all. For further information write the Dunn-Lawrence Co., 248 Alder Street, Portland, Oregon, or Geo. Chamberlain, Mosier, Oregon

## MOSIER

*Also called East Hood River*

## FRUIT LANDS

In large or small tracts. Some very good land at low prices at present. Good growing community. Six miles east of Hood River. Parties wishing to buy will do well to write or see

**GEO. CHAMBERLAIN**  
MOSIER, OREGON

### Government Guarantee of Deposits

already exists for owners of trade-marks. Apple growers should trade-mark their product. Consumers will then know your delicious apples by trade-mark. Consumers will then insist on the trade-marked apples. Total cost of trade-mark, 50 Dollars. Send for circular, "How to Get Twice as Much for the Same Fruit." G. H. MANN, 213 Fourth Street Southeast, Washington, D. C.

## Rogue River Orchards

and Lands for Sale

In 15, 20 or 200-acre lots, both 12-year and 2-year orchards; unsurpassed water and irrigation rights; land slopes to west and south, protected from northeast and north. An exceptional tract for Tokay grapes, apples, pears, peaches, as the fruit itself will prove. Good opportunity for colony or company. Address

**MOUNTAIN VIEW ORCHARDS**

Care Better Fruit Publishing Company  
HOOD RIVER, OREGON

## Willamette Valley Fruit Lands

in tracts to suit. Rich soil, delightful climate. For descriptive literature write

**OLMSTED LAND CO., Salem, Oregon**

# COLUMBIA HEIGHTS

The Heart of the Famous Irrigated Kennewick Highlands

A region of perpetual sunshine and mild winters, where Malaga and Tokay grapes, peaches, pears and cherries attain perfection. The land of the first ripe strawberries. The land where grows the **earliest fruit** of the Northwest. The land whose products bring the highest prices. This is not cheap land, but choice land cheap. There is none better, earlier or more productive in the entire Northwest.

*Sold on easy terms—only thirty-two tracts on sale—buy quick*

**CHAS. F. LOTT, Owner**

**KENNEWICK, WASHINGTON**

# YAKIMA RAW FRUIT LANDS



THE GOVERNMENT'S TIETON PROJECT will bring under irrigation in 1909-10 30,000 acres of the choicest apple, pear and peach land in the whole Yakima Valley, and that means in the Northwest. You can buy this land in ten-acre tracts from five to fifteen miles from the city of North Yakima, for from \$50 to \$150 an acre in easy monthly or annual payments; the government gives you ten years, without interest or maintenance fees, to pay for the water right, which will be exact cost. A rare opportunity to get into the fruit business with very little capital in a famous district.

*We sell fruit ranches, suburban acres on car lines and city property*

*Write for free illustrated booklet with full information*

**TENNANT & MILES, INC., Agents** NORTH YAKIMA  
WASHINGTON



**Richey & Gilbert Co.**H. M. GILBERT, *President and Manager*

GROWERS AND SHIPPERS OF

**YAKIMA VALLEY  
FRUITS AND PRODUCE**Specialties: Apples, Peaches, Pears  
and Cantaloupes

TOPPENISH, WASHINGTON

CORRESPONDENCE SOLICITED

**RYAN &  
NEWTON Co.****Wholesale Fruit and Produce  
BUTTE, MONTANA**We have modern cold storage facilities  
essential for handling your products.  
A strong house that gives reliable  
market reports and prompt cash returns**H. WOODS Co.**  
**WHOLESALE FRUITS**  
and  
**COMMISSION**

Apples, Peaches and Strawberries

127 South Water Street  
CHICAGO, ILLINOIS**PORTLAND  
BROKERAGE CO.***Consignments solicited with quick returns***FRUITS, PRODUCE  
BUTTER AND EGGS**

TELEPHONE A 5758

206 Stark St., Portland, Oregon  
Between Front and First Streets**FAMOUS HOOD RIVER  
Strawberries**THE FINEST BERRY  
ON EARTH AND  
THE BEST SHIPPERLOOK GOOD, BUT TASTE BETTER  
*Fancy Pack Guaranteed***FRUIT GROWERS UNION**

HOOD RIVER, OREGON

**Mark Levy & Co.**COMMISSION  
MERCHANTS**WHOLESALE FRUITS**121-123 FRONT AND  
200 WASHINGTON ST.  
PORTLAND, OREGON**Levy & Spiegel**  
WHOLESALE**FRUITS & PRODUCE***Commission Merchants*

SOLICIT YOUR CONSIGNMENTS

*Top Prices and Prompt Returns*

PORTLAND, OREGON

**FAMOUS HOOD RIVER  
APPLES**Spitzenbergs, Newtowns,  
Jonathans, Arkansas Blacks, Ortleys, Winesaps,  
R. C. Pippins, Baldwins, M. B. Twigs, Ben Davis  
*Look Good, Taste Better, Sell Best*  
GRADE AND PACK GUARANTEED**Apple Growers Union**

Hood River, Oregon

**THE OLD RELIABLE  
BELL & Co.**

Incorporated

WHOLESALE  
FRUITS AND  
PRODUCE109-115 FRONT STREET  
PORTLAND, OREGON**O. W. BUTTS****Wholesale Fruits  
and Commission**STRAWBERRIES AND APPLES  
OUR SPECIALTYA Strong House, Pioneer Dealer  
of Thirty Years' Experience

OMAHA, NEBRASKA

IF YOU WANT TO  
MARKET YOUR**FRUIT**

RIGHT, ALWAYS SHIP TO

**W. B. Glafke Co.**WHOLESALE FRUITS  
AND PRODUCE108-110 Front Street  
PORTLAND, OREGON

W. H. Dryer

W. W. Bollam

**Dryer, Bollam & Co.**Successors to  
DRYER, O'MALLEY & CO.**General  
Commission  
Merchants**128 FRONT STREET  
PORTLAND, OREGON

TELEPHONE MAIN 2348

**Underwood and  
Little White Salmon**  
*Choice Fruit Land for Sale*I have a number of choice places for sale,  
improved and unimproved. Some with good heavy  
timber, ranging in price from \$18.00 to \$100.00  
per acre. I make a specialty of small tracts**F. W. DEHART**

UNDERWOOD, WASHINGTON



**Pearson-Page Co**131-133 FRONT STREET  
PORTLAND, OREGON

Superior facilities for handling

**PEACHES  
APPLES AND  
PEARS****Solicit Your Consignments**

Reliable Market Reports Prompt Cash Returns

THE  
**DAVIDSON  
FRUIT CO.**of  
Hood River, Oregon

Pioneer fruit packers and shippers of this famous section. "Quality" is our watchword, and "Fruit Worth the Price" is our motto. Wire or write us for apples, strawberries or pears in season in car lots or smaller shipments. Other fruits in season in less quantities.

**Ryan & Newton  
Company**Wholesale Fruits & Produce  
Spokane, Wash.

We have modern cold storage facilities essential for the handling of your products.

Reliable market reports  
**PROMPT CASH RETURNS****YAKIMA COUNTY  
HORTICULTURAL  
UNION**

NORTH YAKIMA, WASH.

*E. E. Samson, Manager*APPLES, PEARS, PRUNES, PLUMS,  
PEACHES, CHERRIES, APRICOTS,  
GRAPES AND CANTALOUPEMixed carloads start about July 20.  
Straight carloads in season. Our  
fruit is the very best grade, and  
pack guaranteed.*We Use Revised Economy Coae***Fruit Facts**

Chelan County won 35 gold medals on fruit exhibits at the Portland Exposition, 1905. This record was not equaled by any other county on the Pacific Coast. We will have 75 to 100 cars of apples: Winesaps, Spitzenberg, Rome Beauties, Lawvers, Jonathans, etc., all packed under the supervision of this association. Correspondence solicited.

**Wenatchee Valley  
Fruit Growers' Association**

WENATCHEE, WASHINGTON

M. O. TIBBETTS, President E. T. BALCH, Secretary

**LINDSAY  
& CO. LTD.**

Wholesale Fruits

HELENA, MONTANA

*Established in Helena Quarter of a Century*Branch houses: Great Falls, Montana;  
Missoula, Montana; Billings, Montana.**DEPENDABLE BRAND  
LIME AND SULPHUR SOLUTION***The Only Spray Factory in the Willamette Valley*We guarantee you a 30-degree test and full 50-gallon barrels of  
LIME AND SULPHUR SOLUTION at a price lower than ever.One hundred dollars forfeit will be paid to any one who will find in an original barrel of  
DEPENDABLE BRAND LIME AND SULPHUR SOLUTION anything other than the  
chemicals produced by the combination of pure lime and sulphur.

FOR PRICES AND FURTHER INFORMATION ADDRESS

**Gideon Stolz Company, Salem, Oregon**

Telephone Main 26

**DAVENPORT  
BROS.****WHOLESALE  
FRUIT &  
PRODUCE**

Growers and Shippers of the Famous

**Mosier Valley Fruits**  
Portland, Oregon**D. CROSSLEY & SONS***Established 1878***APPLES FOR EXPORT**California, Oregon, Washington, Idaho and Florida fruits. Apples handled in all European Markets. Checks  
mailed from our New York office same day apples are sold on the other side. We are not agents; we sell apples**200 TO 204 FRANKLIN STREET, NEW YORK**

LIVERPOOL

NEW YORK

BOSTON

GLASGOW

# Ortho Arsenate of Lead

ABOUT four thousand cars of apples will be shipped from the Pajaro Valley, California, this year. These apples are kept free from worms by ORTHO ARSENATE OF LEAD exclusively. Ortho Arsenate of Lead controls the codling moth and absolutely will not burn your foliage. It is the result of the codling moth investigations of the University of California, and it is today manufactured by the experts who conducted these investigations. In two years Ortho supplanted all others, and was sold extensively in the Northwest last year under the brand of the Bean Spray Arsenate of Lead.

*The  
Price  
is  
Right*

**CALIFORNIA SPRAY-CHEMICAL CO.**

BEAN SPRAY PUMP Co., San Jose, *Sales Agent*

Watsonville

## APPLE LAND JUST PUT ON THE MARKET

Write to or call on Frank Davenport, Hood River, Oregon

If you want to buy good apple land in Hood River County, not over six miles from the City of Hood River, West. I have 1800 acres to sell cheap in lots and prices as follows:

|                               |                               |
|-------------------------------|-------------------------------|
| 160 Acres at \$35.00 per Acre | 480 Acres at \$20.00 per Acre |
| 160 Acres at \$30.00 per Acre | 320 Acres at \$15.00 per Acre |
| 160 Acres at \$25.00 per Acre | 520 Acres at \$10.00 per Acre |

This land has water on every 160 acres, and land joining this on the east can not be bought for less than \$225 per acre. Will not sell this land in lots of less than 160 acres.

*Terms:* Half cash, balance long time at six per cent



# Steinhardt & Kelly

101 Park Place, New York, N. Y.

*The largest and most extensive fruit concern in the world  
operating in all the fruit growing sections of the civilized globe*

---

## Exclusive Purveyors of High Class Fruits

---

THE VERY FIRST CONCERN TO  
EXTENSIVELY INTRODUCE THE  
**OREGON APPLES**  
TO THE CONSUMERS OF THE EAST

---

*Sole importers into the United States of fresh fruits, both out-  
door and hot-house, from Asia, Africa, Europe, Australia*

# NOW IS THE TIME TO VISIT California

WHEN summer has passed in these northern states, the sun is only mild under the bright blue skies of Southern California. This is one of nature's happy provisions—eternal summer for those who cannot endure a more severe climate. California has been called the "Mecca of the winter tourist." Its hotels and stopping places are as varied as those of all well regulated cities. Visitors can always find suitable accommodations, congenial companions, and varied, pleasing recreations.

## Southern Pacific Co.

Will be glad to supply some very attractive literature, describing in detail the many delights of winter in California.

The rate from Portland  
to Los Angeles and  
return is

**\$55.00**

Limit six months, allowing stop-overs in either direction. Similar excursion rates are in effect to other California points.

*For full information, sleeping car reservations and tickets, call on, telegraph or write*

**WM. McMURRAY**  
GENERAL PASSENGER AGENT  
PORTLAND, OREGON

Russell Sage says, "Buy Real Estate! Your real estate will make your old age comfortable." *We will go Russell Sage one better —*

BUY AN  
**Apple Orchard**  
in Hood River  
and live comfortably all your life



FANCY PACK OF HOOD RIVER PEARS

## *This is the present day logic*

Growing apples in Hood River not only pays but you live like a man and are independent from the worries and nerve wear that commercial life demands. Your boys will make better men and your daughters better women if they are brought up among the delightful environments that Hood River affords.

*Don't delay any longer!* Now is the time to make the change. *Write us today for lists of orchard farms, city property or investments.* We make a specialty of the best class of properties and give only reliable information.

**J. H. Heilbronner & Co.**

Branch Office  
Corbett Building  
Portland, Oregon

Main Office  
Davidson Building  
Hood River, Oregon



# BETTER FRUIT

A MONTHLY ILLUSTRATED MAGAZINE PUBLISHED IN THE INTEREST  
OF UP-TO-DATE AND PROGRESSIVE FRUIT GROWING AND MARKETING

## NATIONAL APPLE SHOW A CONFIRMED SUCCESS

BY AUGUST WOLF, SPOKANE, WASHINGTON

MICHAEL HORAN, orchardist, stock grower and banker at Wenatchee, Washington, is the apple king of America, having gained that distinction by capturing the chief prize of \$1000 for the best carload exhibit at the National Apple Show in Spokane, December 7 to 12, when \$35,000 in premiums were awarded to competitors from various parts of the United States. Washington growers took 58 first prizes, Canada captured 15, 11 went to Idaho, one to Montana and the rest were scattered. Much to the disappointment of the management and the thousands of visitors, representing every state and province on the continent, practically all the fruit sent from the states east and south of the Rocky Mountains was spoiled in transit. The apples had been taken out of cold storage and were sent to Spokane in heated cars, thus making them unrepresentable. To show the displays would have been manifestly unjust to the districts, so Harry J. Neely, secretary and manager, decided not to place them in competition or on exhibition, though prize moneys, medals and diplomas will be forwarded to the growers from every state entered in the district contests.

Oregon had seventy boxes of fruit on exhibition. These apples had been shown at the Hood River Fair and the Fruit Fair of the Oregon Horticultural Association at Portland, where some of them won first and second prizes. Nine orchards were represented in the display in charge of E. H. Shepard, of Hood River. The exhibit included Ortley, Spitzenberg, Yellow Newtowns, a favorite of the Hood River valley; the Red Cheek and several others of the favorite varieties. The display was awarded a silver cup from the management, although it was not entered in competition. A special prize and diploma were awarded to Luther Burbank, of Santa Rosa, California, for a display of thornless cactus, Passion fruit and rhubarb.

Records at the stiles showed 102,762 paid admission tickets, 4000 season tickets and several hundred press and

complimentary tickets, bringing the total attendance to 107,000 for the week. The statement of the daily paid admissions follows: December 7, 14,352; 8, 14,070; 9, 18,000; 10, 20,070; 11, 19,270; 12, 17,000; total, 102,762. The first exhibition of its kind and scope was so successful that it will be made an annual affair. It is likely that the prizewinning displays in 1909 will be sent to Chicago or some Eastern city for exhibition purposes.

The show was formally opened when President Roosevelt pressed the button in the White House at 10:30 o'clock

Second Vice President and Chairman of the Board of Directors, presided, introducing as the first speaker Louis W. Hill, President of the Show and head of the Great Northern Railway Company. After congratulating the people of Spokane on their enterprise and the growers on their exhibits, Mr. Hill said in part:

"In Southern California in 1892 the growers shipped 4016 cars of oranges and lemons. In 1907 they shipped 27,493 cars. They received for these an average price of \$1.42 a box. The Washington apple shipments, according to government figures, in 1890 were about 600 cars, against California's 4000, and this year the shipment of apples will probably be 3000 to 4000 cars, or about what Southern California was shipping in oranges in 1892. The apple business will grow quite as fast as the orange business, and the apples should readily find a market. Apples are bought by the box or barrel, while oranges are bought by the case or dozen or half dozen, few people buying a case or box of oranges. It is important to know that the orange business in southern California in that period increased from 4000 cars to 27,000, and you will do the same.

"From the United States Government census reports I take it that the number of apple trees in 1890 was 120,000,000 and ten years later 201,000,000. That is an increase of sixty-eight per cent in the nation. In Washington in 1890 you had about 300,000 apple trees, according to the government report. Ten years later 2,700,000, or an increase of 768 per cent, was shown. The apples produced in the United States in 1890 were 143,000,000 bushels. Six years later the amount was 175,000,000 bushels, an increase of twenty-two per cent. This country has increased more than that. The apple export figures are important because the market that we will work up will probably be in the exporting of apples.

"We raise a great deal of wheat, but we import wheat. We have never

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#### THE WASHINGTON HORTICULTURAL ASSOCIATION

#### FACTS CONCERNING PRACTICAL IRRIGATION

#### GOVERNMENT TO SAVE PHOSPHATE BEDS

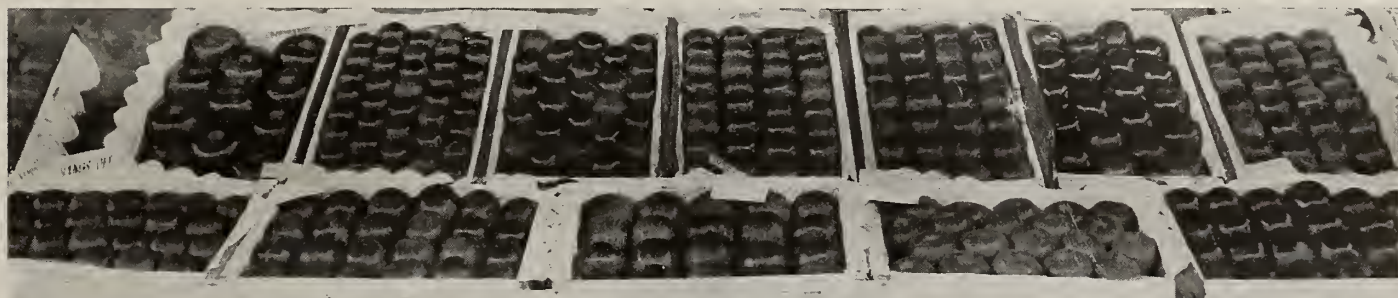
#### PREPARATION AND USE OF SULPHUR- LIME WASH

#### FRUIT GROWER TELLS HOW TO PRUNE TREES

#### HOW TO HOE AND FERTILIZE THE STRAWBERRY

#### CONDITION OF APPLE MARKETS IN EUROPE

(Pacific time) the morning of December 7. This was the signal for the blowing of factory and locomotive whistles and ringing of church, school and fire bells, other noise-producing apparatus taking up the strain till the air trembled with vibrating sounds from Cannon Hill to the timbered bluffs on the north. Following the parade, led by the National Apple Show band of forty pieces under the direction of A. G. Reemer, there was a program of speeches at the state armory, which formed part of festival hall, embracing 85,000 square feet of floor space. E. F. Cartier Van Dissel,



APPLES FROM ROCKLAND FRUIT FARM, NORTH YAKIMA, WASHINGTON



imported apples, and every other country does, so we ought to export them, but our exports of apples so far have been small. The apple export in 1902 amounted to 2,800,000; in 1906, 5,800,000, and in 1907, 7,800,000. This is a good business and a good market, and we want to keep it up. The apple industry of the country was, in 1899, 58,000,000 barrels and the export was less than one per cent, so it shows that we are not doing as much as we might. The American apple sells higher in Berlin, or in any place in Germany, than the American oranges. Apples take better in Europe than oranges do, and there is no reason why we should not reach that market."

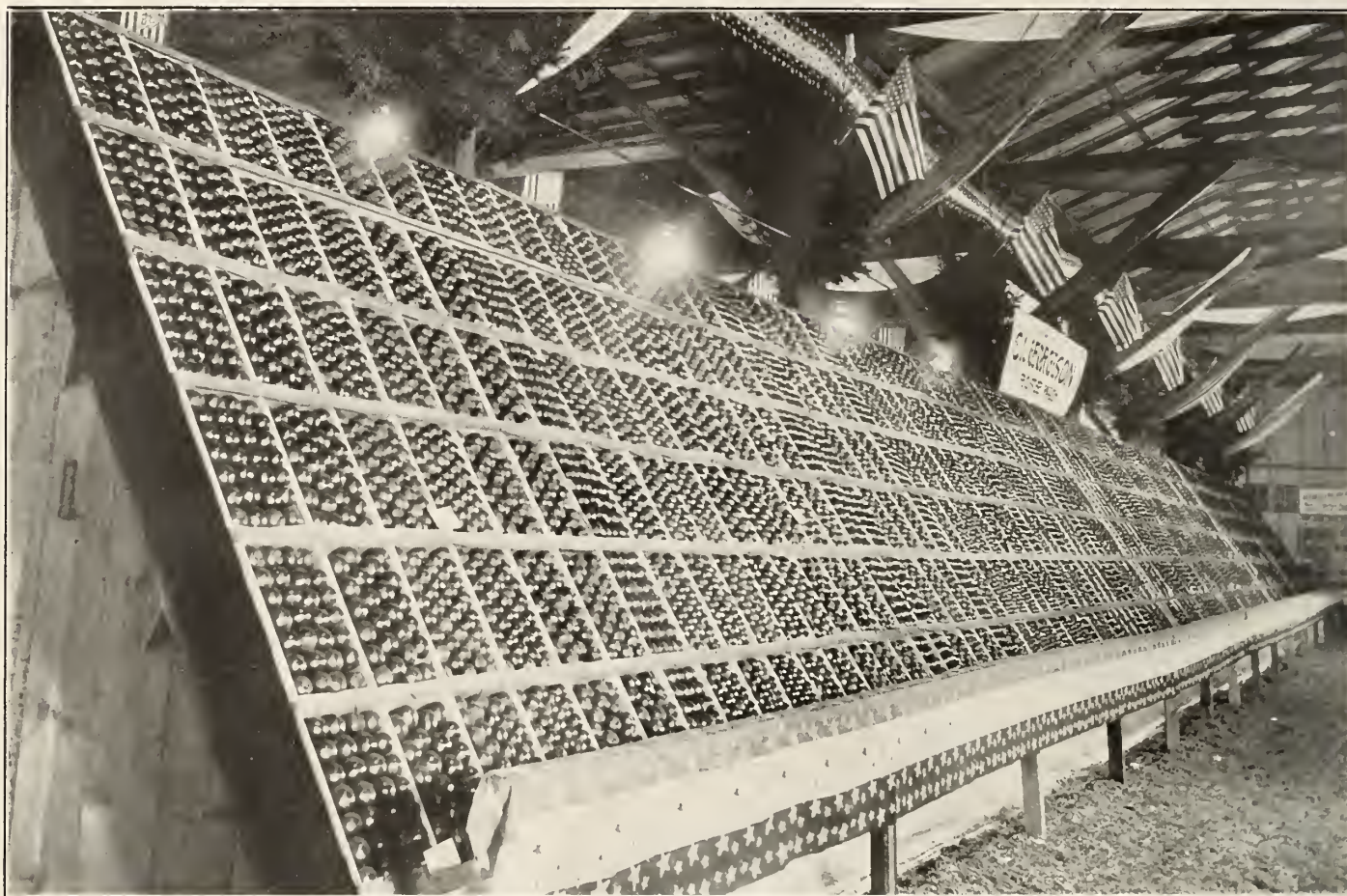
which will grow a community that will correspond with the apple, a community that will make every county seat, every county, every township a Garden of Eden, and they won't need any expulsions.

"You have apples here, and people here from every place, from the bending palmetto of the Sunny South to the frozen lakes of the North; from the turbid waters of the Atlantic on the east to the waters of the peaceful Pacific on the west. They have come here to bow down to the greatest country on earth, and crown the apple king, queen and all the rest of the royal family."

Governor Albert E. Mead delivered the address of welcome in behalf of the

designs. There was the Stars and Stripes in three colors of apples, a white salmon of true form and almost natural color, and figures and devices, jars, baskets, barrels and boxes of apples and just heaps of apples piled up in plentiful confusion. There were 940 plate exhibits.

The Show was one of surprises and charm. It was more than an entertainment; it was more than educational; it was inspirational. As an observant visitor remarked, "It comes with clearness and force to the mind that apple growing is a delightful and profitable industry, capable of manifold and speedy development. Here is the product from orchards already in bearing, but young



NATIONAL APPLE SHOW, SPOKANE. MINED CARLOAD DISPLAY MADE BY C. C. GEORGESON OF PROSSER, WASHINGTON.

Tom Richardson, Secretary of the Oregon Development League and Manager of the Portland Commercial Club, said in part:

"The apple is the greatest fruit that the temperate zone produces. Our fruit will in a generation exceed in value the combined output of the lumber mills, the dairy and all the other industries and resources, because I want to say to you that the real fruit land of the world for the apple is here. It is in Washington, Oregon, British Columbia, Idaho and Montana, in this great Northwest of ours.

"And where should a celebration of the apple be held but in Spokane, as a city the active center of the greatest immigration movement on this continent? You can talk all you please of the rivalry of Seattle and Portland and San Francisco and Los Angeles, but here is the ideal, the farmer's center, the home building center, a magnificent railroad center, the tremendous hub around

people of the state of Washington, Mayor C. Herbert Moore made the address for the people of Spokane and Frederick E. Goodall, President of the Spokane Chamber of Commerce, spoke for that organization.

Apples of all sizes and varieties were exhibited in the highest state of perfection and with all the advantages which expert packing can produce. There was one carload of fruit covering 1500 square feet of space, in which 70,000 dark red apples of uniform size and shade spread out in an expansive slope. On another was seen the bizarre effects of brilliant yellows and bright reds alternating in five-box lots, while in other places the rich Arkansas Blacks burned with a dull purple fire against a background of lighter shades.

There were state, district, county and individual exhibits by the hundreds, and it is likely that never before has man's genius contrived so many ways of utilizing a single fruit in such a diversity of

orchards many times larger than the bearing orchards are now in the soil and under cultivation. We know that the product will be greater next year than this year, and greater every year thereafter for the next decade, even though not another apple tree should be planted. But more of them will be planted every year, and the expectations held out in their addresses by the speakers at the opening exercises of a coming product that will exceed in value the present returns from wheat-growing, mining and lumbering are not fanciful or improbable."

The prize-winning earload was bought by D. Crossley & Sons, of Liverpool. The three earloads exhibited by General T. R. Tammatt, whose orchards are at Farmington, Washington, were bought by Samuel Haines, of London, and will be shipped to England. The car of McIntosh Reds of Kress & Carey was taken by W. C. Michael for the Gibson Fruit Company and will be shipped to Chi-



cago. He also bought a car of C. C. Georgeson, of Prosser, Washington, for the Gibson company. H. S. Simmons, of Wenatchee, sold his exhibit to Crutchfield & Woolfolk, of Pittsburg. The apples from the White Salmon Valley and the Klickitat County exhibit, 225 boxes, have been repacked for shipment to Seattle, where they will be held in storage for the Alaska-Yukon-Pacific Exposition next summer. Other growers gave their exhibits to charitable institutions of Spokane.

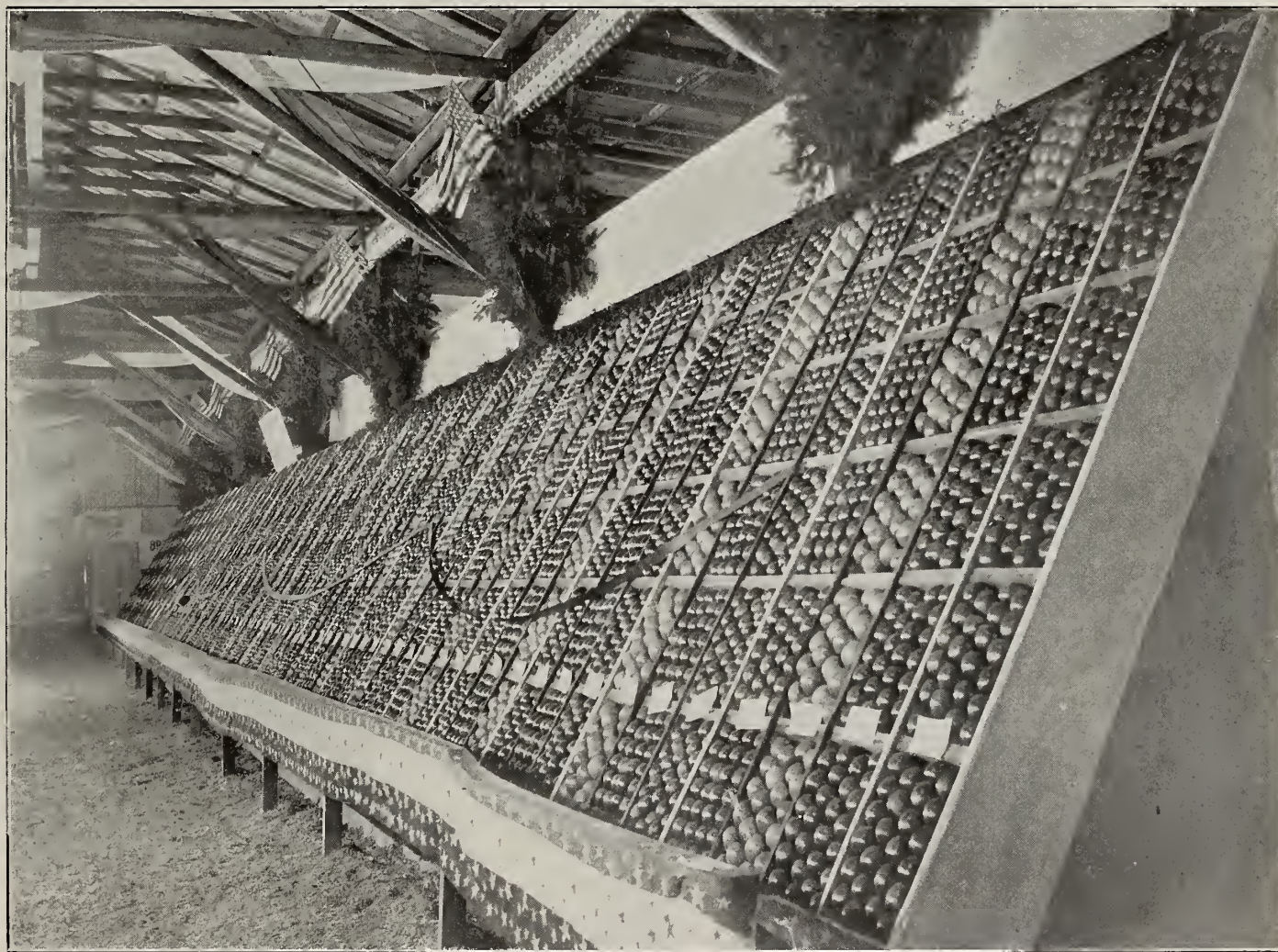
There were scores of American and European buyers who secured the prize-

In addition to the barrel, box, basket and plate exhibits, demonstrations by spraying, packing and measuring machine concerns and exhibits of apple parers, cider presses and nursery stocks, seventeen young women of the domestic science department of Washington State College, under Miss L. Gertrude Mackay, were in attendance the entire week and taught housewives how to prepare apples in 125 different ways. The young women occupied an entire floor of an auxiliary building and fed ten thousand persons during the week. The receipts will go toward equipping a new

December 8 to 11, when pomologists of national reputation read papers and led discussions.

There was keen rivalry in the carload competition. The entries were: M. Horan, Wenatchee, Washington; H. M. Gilbert, North Yakima, Washington; Kress & Carey, Hamilton, Montana; C. C. Georgeson, Prosser, Washington; H. S. Simmons, Wenatchee, Washington; T. R. Tannatt, Farmington, Washington. The latter had three carloads.

Mr. Horan's exhibit was a mixed car of 630 boxes, or 50,000 apples, with which he scored 96¼ out of a possible



MIXED CARLOAD EXHIBIT OF JONATHANS, WINESAPS AND SPITZENBERGS, ETC., IN ALL NINE VARIETIES, WHICH RECEIVED THE CHIEF PRIZE OF \$1,000 AT THE NATIONAL APPLE SHOW IN SPOKANE. EXHIBITED BY MICHAEL HORAN, OF WENATCHEE

winning exhibits, prominently among them being William Crossley, representing D. Crossley & Sons, Liverpool, Glasgow, New York and Boston; James L. Gibson, of Liverpool, representing three English firms, handling 500,000 barrels of American apples a year; Samuel Haines, exporter, who handled 700,000 barrels last season; Crutchfield & Woolfolk, Pittsburg; W. C. Michael, Gibson Fruit Company, Chicago. The English buyers said they will make a big hole in the crop of the Northwest in 1909, Mr. Haines adding: "Great Britain wants these apples and she's going to get more of them every year." There were also horticultural experts from all parts of the country. J. L. Jones, of Columbia, Tennessee, came three thousand miles to gather data for the Tennessee State Horticultural Society.

laboratory at the college. Oregon Agricultural College had Professor C. A. Cole and two assistants demonstrating the various methods of apple packing and dust and liquid spraying.

There was also a program of high-class vaudeville acts and concert and promenade music. The Spokane Male Chorus, the Spokane Elks' Quartette and C. A. Heath, baritone, furnished the vocal music. Professor Frank G. Odell, of Lincoln, Nebraska, performed with fifty thousand Italian bees and delivered two lectures daily on the value of the bee as an assistant to orchardists and farmers. There were also banquets in honor of the judges, growers and competitors and receptions and theater parties for their ladies. Another feature was the annual meeting of the Washington Horticultural Association,

100 points. H. M. Gilbert, of North Yakima, Washington, formerly President of the Washington Horticultural Association, was second with a car of 70,560 Winesap apples, scoring 93¾ points and winning \$500, and Messrs. Kress & Carey, of Hamilton, Montana, were third with a car of McIntosh Reds, scoring 85 points and winning \$200 and 1000 standard apple trees. In addition to the foregoing the judges distributed premiums amounting to \$33,300 in other competitions, representing practically every apple belt in the country.

The officiating judges were: Maxwell Smith, Dominion fruit inspector, British Columbia; Professor John Craig, head of the department of Agriculture, Cornell University, Ithaca, New York; H. M. Dunlap, Savoy, Illinois, President National Apple Growers' Association;



R. W. Fisher, professor of Agriculture, Montana Agricultural College; S. A. Beach, horticulturist Iowa Agricultural College; Claude I. Lewis, professor of General Agriculture and Pomology, Oregon Agricultural College; Professor J. R. Shinn, horticulturist University of Idaho, and Professor W. S. Thornber, horticulturist Washington State College.

Mr. Horan said: "This is the first time I ever exhibited fruit. The apples were picked by one man and packed by another. Our average was ten boxes a day, requiring two months to prepare

that time I cleared twenty acres and set out a portion of it to apple trees, growing garden truck between the rows. In the third year I finished setting out trees and put in apricot, peach and pears as fillers. This year, however, I cut out all the peach trees. The orchard consists principally of Winesaps, because this is one of our best commercial apples, but there are also Arkansas Black, Spitzenberg, Missouri Pippin, Jonathan and Ben Davis. In the last six years the peaches have yielded \$1000 an acre. The entire orchard this year yielded 800 boxes of pears, 3500 boxes

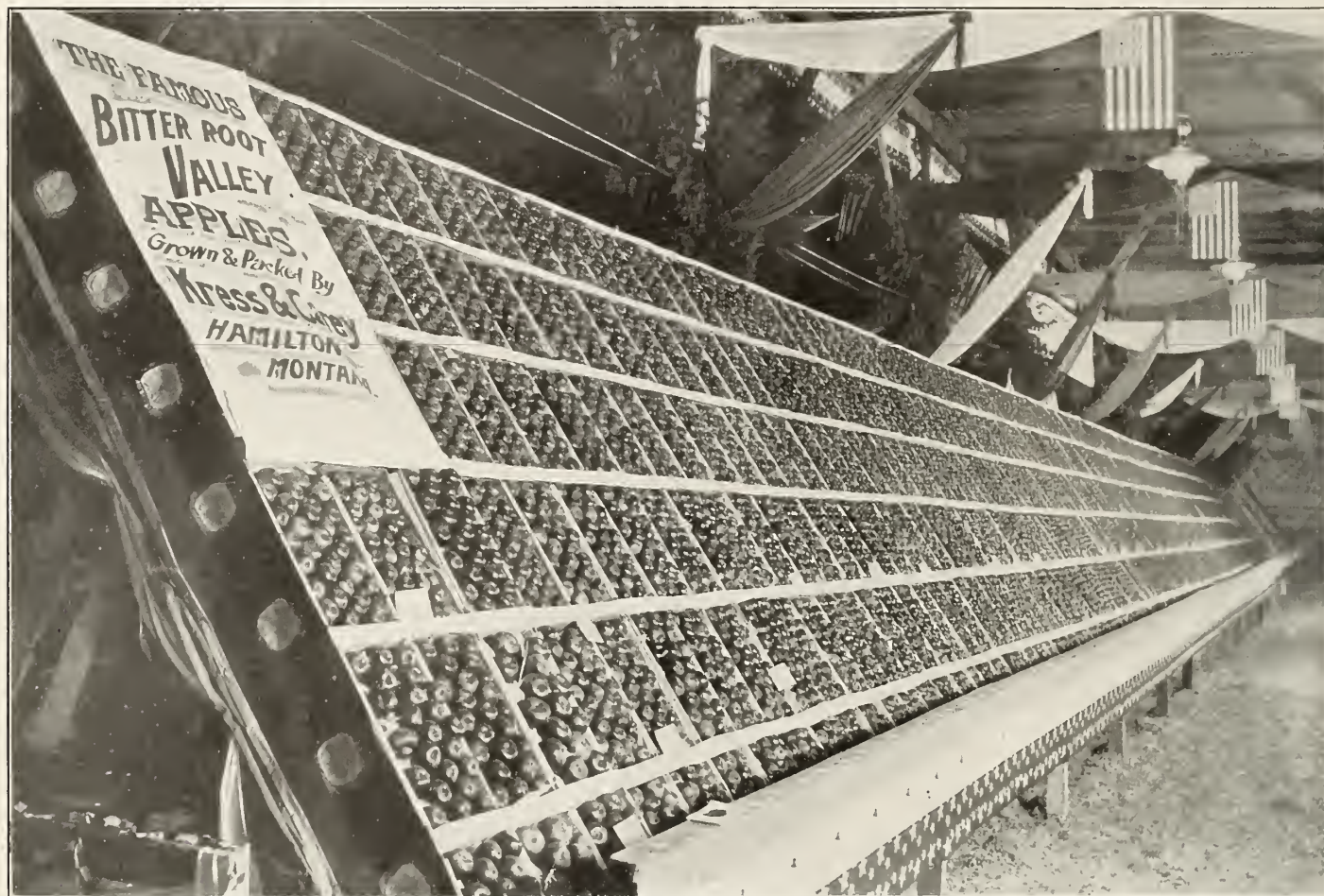
Kress & Carey—Bulge, 3; alignment, 3; height of ends, 3; firmness, 2; attractiveness, 3; total, 14.

Mr. Gilbert entered a formal protest, claiming there should have been a difference of five points in his favor on the pack, but the directors sustained the judge.

The principal awards were made as follows:

Best Carload—Mr. Horan, Wenatchee, Washington, first, \$1,000; H. M. Gilbert, North Yakima, second, \$500; Kress & Carey, Hamilton, Montana, third, \$200 and 1,000 apple trees.

Best Individual Display, Two Boxes, Barrels, Baskets, Jars or Plates—F. R. E. DeHart, Kelowna, British Columbia, first, \$500 and \$50 for two boxes of fruit; O. G. France, Wenatchee,



CARLOAD EXHIBIT OF MESSRS. KRESS & CAREY, HAMILTON, MONTANA, AWARDED THIRD PRIZE AT THE NATIONAL APPLE SHOW, SPOKANE, WASHINGTON, DECEMBER 7 TO 12

the exhibit. Every care was taken to pack without blemish, bruise or scratch. Before the award was made I would not have taken \$5 a box for the apples. My orchard should yield 14,000 boxes of pears, 14,000 boxes of peaches and 16,000 boxes of apples in 1909. I had no practical knowledge of scientific fruit growing until a few years ago. At that time the land was worth \$100 an acre. That was in 1900, when the first trees were set out. I have refused an offer of \$2000 an acre, or \$100,000 for the tract. I would not take \$250,000 for the orchard today."

Mr. Gilbert, winner of the second prize in the carload competition, said he entered a straight exhibit of Winesaps, running four to a tier, or 112 in a box, for the purpose of showing visiting Easterners what a carload looked like. He had more than a car of 4½-tier, but chose the largest and best. Of his orchard at North Yakima he said:

"The orchard is set out where ten years ago sagebrush was growing. At

of peaches, 300 boxes of apricots, 7000 boxes of apples and some cherries. The exhibit at the show represented one-fifth of the crop grown on three and one-half acres of eight and ten-year-old apple trees."

The carload exhibits were judged by Professor Claude I. Lewis, of the Oregon Agricultural College, the scores showing as follows:

Horan—First; value variety, 20; texture and flavor, 15; size, 9½; uniformity, 10; combination and freedom from blemish, 9½; pack, 19¼; total, 96¼ out of a possible 100 points.

Gilbert—Second; value variety, 20; texture and flavor, 14½; size, 9½; uniformity, 9½; color, 14; condition and freedom from blemish, 7½; pack, 19¼; total, 93¾ points.

Kress & Cary—Third; value variety, 20; texture and flavor, 14; size, 9; uniformity, 7½; color, 12; condition and freedom from blemish, 8½; pack, 14; total, 85 points.

The following sub-points on pack for boxes, each with a possible value of 4, were scored:

Horan—Bulge, 3½; alignment, 4; height of ends, 3½; firmness, 4; attractiveness, 3½; total, 18½.

Gilbert—Bulge, 3¾; alignment, 4; height of ends, 4; firmness, 4; attractiveness, 4; total, 19¾.

\$300; Chelan Commercial Club, Chelan, Washington, \$200.

Largest Apple—W. R. Marr, Wenatchee, Washington, weight 30 ounces, circumference 17½ inches, bronze apple and \$10; Red Apple Real Estate Company, Wenatchee, silver cup; Richard Ball, Methow, Washington, honorable mention.

Box Pack—F. R. E. DeHart, Kelowna, British Columbia, \$100; Mrs. J. A. Smith, Victoria, British Columbia, \$50; I. W. Cockle, Kaslo, British Columbia, \$25.

Best Packed Barrel—F. R. E. DeHart, Kelowna, British Columbia, Myers spray pump and \$50; E. L. Stewart, Prosser, Washington, \$30 and diploma.

Winesap Pack—F. J. Black, Wenatchee, 1,000 standard apple boxes; C. L. Green, Wenatchee; John Lewis, Curby, Washington.

Best Five-Box Commercial Pack—W. F. Cash, Underwood, Washington, silver cup and \$50; Mrs. J. A. Smith, Victoria, British Columbia, \$30 and diploma; Miss Grace Stewart, Prosser, Washington, \$15 and diploma.

Best Five-Box Exhibit Pack—Tedford Brothers, Wenatchee, Washington, \$50 and cup; Oscar Stahl, Prosser, Washington, \$30 and diploma; Red Apple Real Estate Company, \$15 and diploma.

Best Wageners, 10 boxes—Harry E. Nelson, Chester, Washington, five acres Meadow Lake land, value \$1,000, and 250 apple trees; J. H. Clay, Michel, Washington, \$100; A. J. Chandler, Spokane, medal.

Inland Empire Railway Special—J. F. Forney, Moscow, Idaho, \$100 cash; F. W. Bronson,



Sharon, Washington, diploma; A. I. Seiter, Spokane.

Best Plate Exhibit for Women—Mrs. E. Lowe, Keremcos, British Columbia, \$50 worth Burbank's winter rhubarb and diploma.

Best Plate Exhibit Delicious, King David, Black Ben Davis, Senator—George Farwell, Wenatchee, 200 apple trees.

Preserved Apples—George Farwell, Wenatchee, \$25; J. H. Forney, Moscow.

Best Fifteen Boxes Spitzenbergs—Tedford Brothers, Wenatchee, five acres of land in Spokane Valley and 500 apple trees; J. D. Taggard, Waitsburg, \$100; Mrs. J. A. Smith, Victoria, British Columbia, medal.

Best Ten Boxes Winesaps—Tedford Brothers, Wenatchee, five acres of land in Otis Orchards and 500 apple trees; D. W. Roderick, Wenatchee, \$100; T. A. Atkinson, Wenatchee, medal.

Best Ten Boxes Northern Spy—F. R. E. De Hart, Kelowna, British Columbia, land at Hayden Lake, worth \$1,250, and 500 trees; C. E. Atkinson, Mead, Washington, \$100 cash; Wright Brothers, Wenatchee, medal.

Best Ten Boxes Winter Banana—W. E. Brayton, Peach, Washington, eight acres Eden Orchards land, valued at \$1,700, and 100 trees; M. Horan, Wenatchee, \$100 cash and medal.

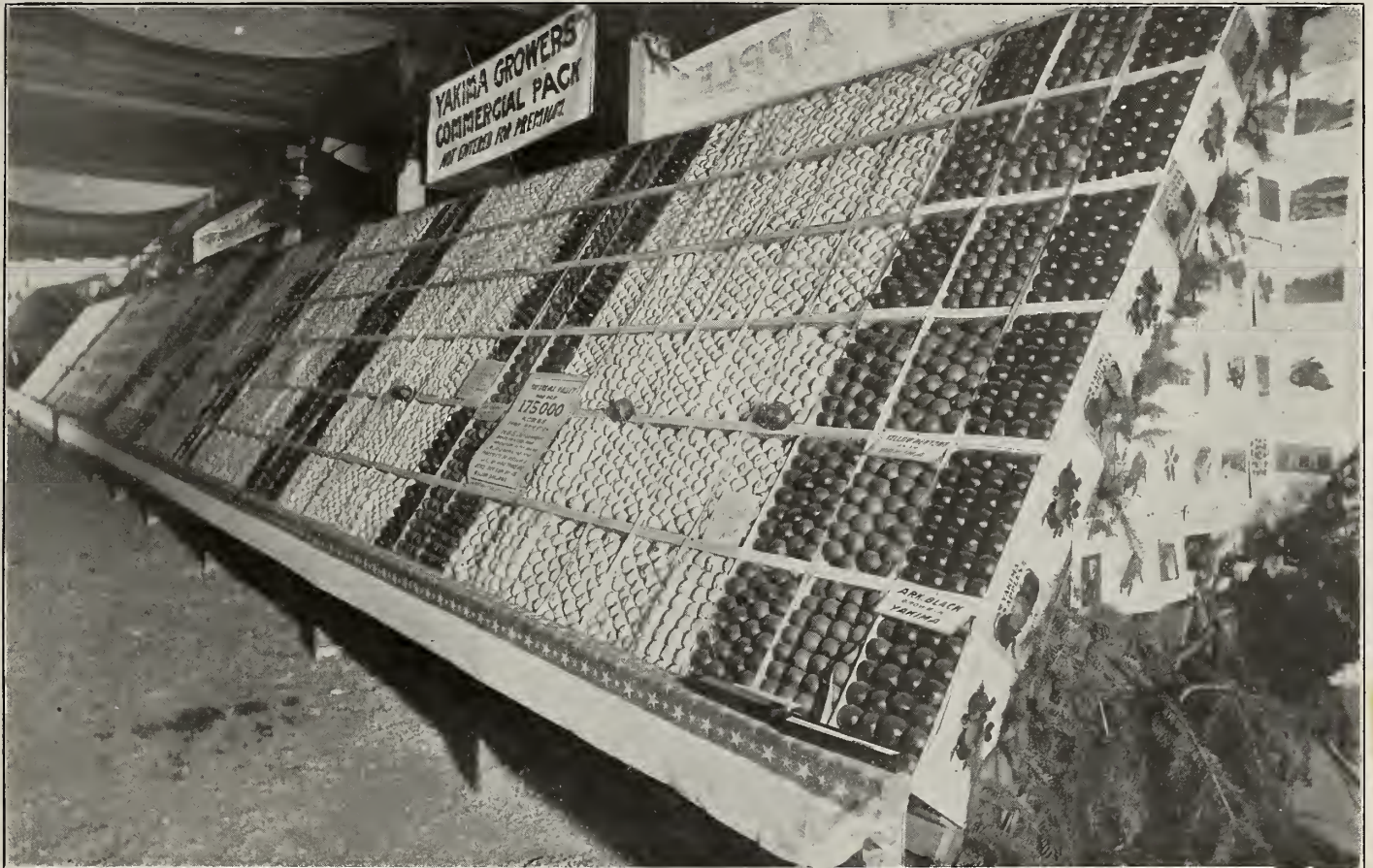
Best Ten Boxes Rhode Island Greenings—George Farwell, Wenatchee, five acres land at Valleyford, worth \$1,250, and 500 trees; R. A. Jones, Spokane, \$100 cash and medal; John Lewis, Curby, Washington, medal.

Best Ten Boxes Yellow Newtowns—J. L. Dumas, Dayton, five acres land at Hazelwood, worth \$1,500, and 500 trees; W. F. Cash, Underwood, Washington, \$100 cash and medal.

routes, as it would greatly facilitate the transportation both of the articles purchased by them, and of many of their products sold in the neighboring towns and villages; and

Whereas, It is now proposed to establish experimental local parcels post systems in certain counties for the purpose of demonstrating the practicability of conducting such a system on all rural free delivery routes of the country; therefore,

Resolved, 1. That we reaffirm our demand for a general parcels post law



CARLOAD OF MIXED VARIETIES, COMMERCIAL PACK, EXHIBITED BY THE GROWERS OF THE YAKIMA VALLEY, AT THE NATIONAL APPLE SHOW IN SPOKANE, DECEMBER 7 TO 12. THIS EXHIBIT WAS NOT ENTERED IN COMPETITION FOR ANY PREMIUM

Best Ten Boxes Rome Beauties—J. L. Dumas, Dayton, Washington, Arcadia land at Deer Park, Washington, worth \$2,000, and 500 trees; T. A. Wright, Wenatchee, \$100 cash; George Farrell, Wenatchee, medal.

Best Ten Boxes Jonathans—F. R. E. DeHart, Kelowna, British Columbia, land at Edendale, worth \$2,000, and 250 trees; J. L. Dumas, Dayton, \$100 cash; H. M. Gilbert, Toppenish, Washington, medal.

Best Ten Boxes Arkansas Black—Ellsworth France, Wenatchee, land in Spokane Orchards, worth \$1,750, and \$25 worth of nursery stock; F. L. Black, Wenatchee, \$100 cash; T. A. Atkinson, Wenatchee, medal.

Best Box Winter Bananas—Felix Pugl, Spokane, 350 apple trees; Kettle Falls Valley District, Kettle Falls, Washington, 150 trees.

Best Box Stayman's Winesap—Joseph Platter, Entiat, Washington, 100 trees; George Farwell, Wenatchee, diploma; C. J. Green, Grand View.

Best Box Jonathans—J. W. Callison, Greenacres, Washington, 100 trees; Henry Jones, Clarkston, Washington, diploma; G. T. Richardson, Monitor, Washington.

Best Spokane Wageners—C. E. Atkinson, Mead, Washington, silver cup; Harry E. Nelson, Chester, Washington; H. B. Graybill, Spokane.

applying to all the postoffices of the country;

2. That we favor the adoption of the special post system on rural delivery routes, and urge the immediate enactment by Congress of legislation for this purpose.

#### Postal Savings Banks

Whereas, A bill (Senate 6484) providing for the establishment of postal savings banks has been favorably reported to the Senate and is now on the calendar of that body; and

Whereas, The enactment of this bill would greatly benefit the farmers of the country, particularly in the more sparsely settled districts and sections remote from banking facilities, by providing a convenient method of deposit for their savings, with absolute security against loss; therefore

Resolved, That we endorse Senate Bill 6484 as a measure directly in the interest of the farmers, and call upon all members of the Grange to write to their Senators and Representatives in Congress, urging them to vote for this bill.

## PARCELS POST AND POSTAL SAVINGS BANK RESOLUTIONS ADOPTED BY NATIONAL GRANGE

### Parcels Post

WHEREAS, The Grange has unceasingly advocated the enactment by Congress of legislation providing for a general parcels post system, and

Whereas, It is proposed by the Postmaster General of the United States that the parcels post law should be amended so as to provide for a special

local parcels post system on rural delivery routes; and

Whereas, It has been clearly shown that such local parcels post system would not only be self-sustaining, but would be a source of profit to the Post-office Department; and

Whereas, The adoption of the proposed extension of the parcels post would be of great advantage to the farmers adjoining the rural free delivery



# THE WASHINGTON HORTICULTURAL ASSOCIATION

**T**HE Washington Horticultural Association at its fifth annual convention in Spokane, December 8 to 11—when H. M. Gilbert, of North Yakima, president of the organization, presided at the eight sessions—adopted resolutions recommending the enactment of a law by the legislature of 1909 prohibiting the liquor traffic, pool-selling and race-track gambling at county, state and interstate fairs; the repeal of the state horticultural law and the enact-

mere; Second Vice President, E. F. Benson, Prosser; Secretary, Levi Grant Monroe, Spokane; Treasurer, H. W. Greenberg, Spokane. The next annual meeting will take place at Wenatchee the first week in December.

Recommendations by the legislative committee were adopted as follows: That the legislature appoint a state horticultural commissioner and inspectors for twenty or more districts; that adequate provision be made for assistant

original cost of trees sold not true to name.

Three hundred orchardists and several hundred growers from various parts of the state attended the opening session, when the delegates were welcomed to the Power City by Mayor C. Herbert Moore. The response was by General T. R. Tannatt, of Farmington. President Gilbert in his annual address urged the repeal of the present state horticultural law and the enactment of a

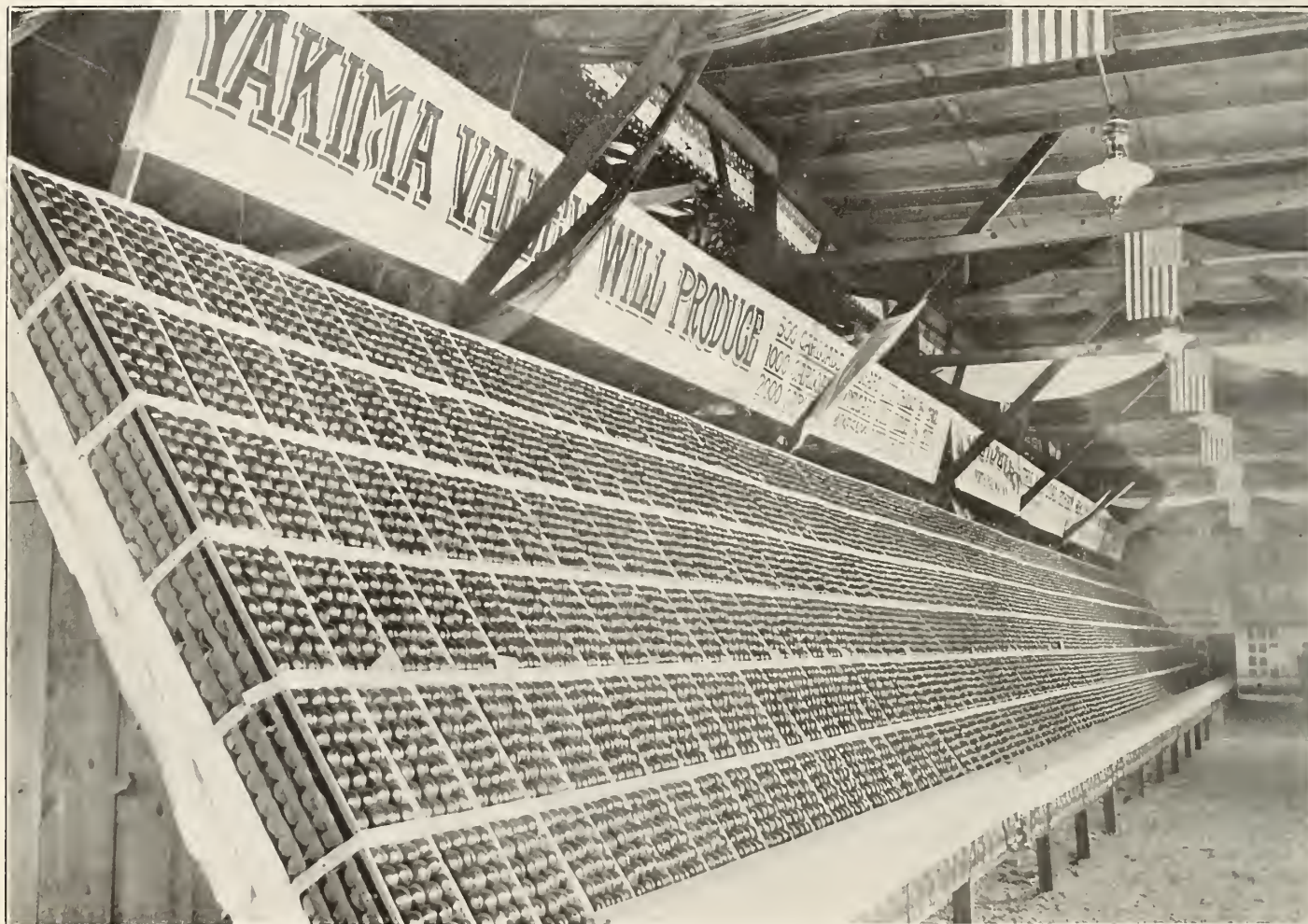


EXHIBIT OF 70,560 WINESAPS, BY H. M. GILBERT OF NORTH YAKIMA, WASHINGTON, WHO WAS AWARDED THE SECOND PRIZE OF \$500 IN THE CARLOAD COMPETITION AT THE NATIONAL APPLE SHOW IN SPOKANE, DECEMBER 7 TO 12

ment of one which could be enforced; making the National Apple Show an annual affair; the insertion of a clause in the local option law, if enacted, making the unit no smaller than the county.

The association put itself on record as favoring the immediate improvement of public highways and a practical method of raising funds to bring this about; that industrial training in the public schools be adopted; also encouraging the growth of sufficient nursery stock to supply the demands of orchardists in the state; encouraging the importation and protection of insectivorous and song birds and requesting the legislature to appropriate \$2000 for the publication of the annual horticultural report. The Porter Apple Box bill was condemned.

These officers were elected for 1909: President, J. L. Dumas, Dayton; First Vice President, M. O. Tibbetts, Cash-

inspectors during the busy season; that the commissioner and district inspectors be appointed for indefinite terms and be removed only for neglect or inefficiency, or that an inspector may be removed by a petition of the majority of the owners of commercial orchards in his particular district; that the inspectors shall be state officials and paid as the other state officers. It was also urged that the legislature enact a law legalizing the apple and pear boxes at present in use; that the name and address of grower and shipper be stamped on each package; that infected fruit where found by the inspector may be repacked by the owner, or in case of the non-appearance of the owner, that the inspector shall pack the same at the expense of the owner; that infected fruit used for by-products may be sold or shipped in the state with proper restrictions, and that all nurseries be fined ten times the

measure making compulsory an effective and complete inspection of the orchards and all nursery stock in the state; also compulsory spraying of orchards infected with pests or disease and the inspection in public markets by responsible inspectors. He entered a protest against changing the standard apple box, advocated a concerted demand for fast fruit trains and indorsed the national movement for better roads, adding: "You will have to go into debt to issue bonds to improve the highways, but in good roads debts you are, in a sense, loaning money to yourself. It is a case where 'You have your cake and eat it, too.' The money expended for good roads will nearly all be expended in your own community for labor, and the labor will scatter this money where it will enrich the entire community, tradesmen and producers alike. Let me ask any one here if it has not been good



policy for you to go into debt? Are you not richer because you went into debt to buy Washington fruit lands?"

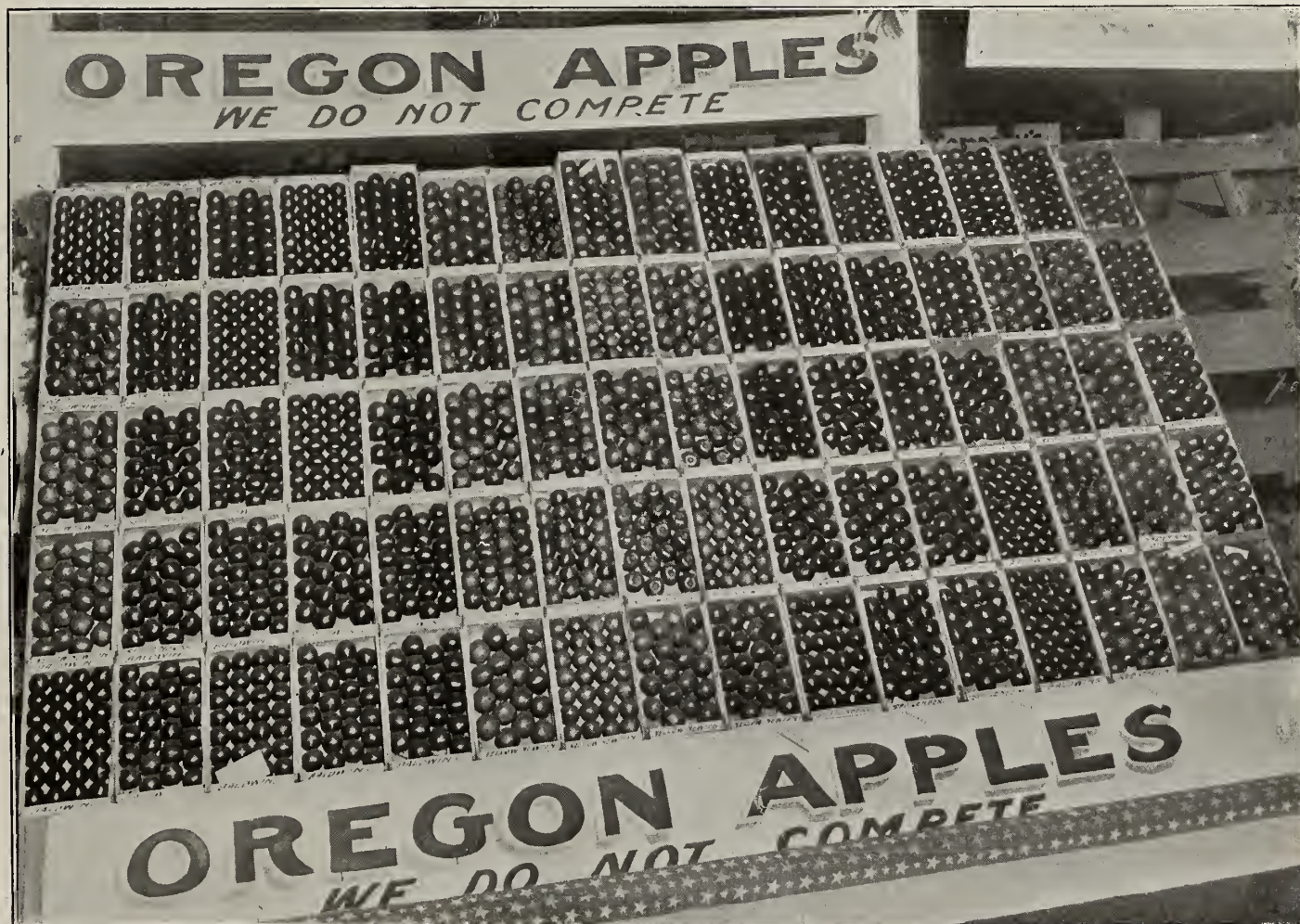
A. F. Crowell, of Spokane, deputy fruit inspector, spoke at the second session, taking as his topic, "From the Inspector's Outlook," saying there was noticeable improvement in orchards and nursery stock since the beginning of the year. Other speakers were George W. R. Peaslee on "The Handling of Nursery Stock to Insure Trueness to Name;" E. F. Benson, Prosser, on "Knowledge of Varieties and the Seasonable Marketing of Fruit," and Professor E. E.

reader, but not a bookworm. He is a thinker, but not an impracticable dreamer, whose ideals never crystallize into action. He is alone with nature, but not shut out from the society of men. He mingles in society, but is not controlled by social sets. We are in a strategic position and can be an important factor in shaping the world's destinies if we will.

John Craig, professor of Horticulture at Cornell University, told of the European market as an outlet for American apples and buyers, saying that the apple trade abroad seems to demand a good

also treated the dry-farming methods as compared with those employed by the farmer who follows the irrigation methods. Professor Cyrus L. Smith, institute lecturer of Spokane, discussed "Growing Apples Without Irrigation."

Four hundred members attended the sessions the third day, when Professor P. J. O'Gara, assistant pathologist of the Bureau of Plant Industry, Washington, D. C., spoke on "Diseases of Pomaceous Fruits, with Special Reference to Pear Blight," illustrated with lantern slides. He said in part: "By a careful pruning of the diseased orchards and cleaning up



DISPLAY MADE BY OREGON AT THE NATIONAL APPLE SHOW, SPOKANE, DECEMBER 7 TO 12. NOT ENTERED FOR COMPETITION

Grown at Hood River by E. H. Shepard, publisher of "Better Fruit," Chris Dethman, H. R. Albee, N. C. Evans, J. L. Carter, John Hakel, William Ehrck and L. E. Clark. A great part of this display had been on exhibition at the Hood River Biennial Fair, Hood River, Oregon, and the State Horticultural Meeting of Oregon at Portland. It was awarded a special cup on account of its handsome appearance. Through an unfortunate misunderstanding, Oregon did not enter her apples in competition at the National Apple Show.

Elliott, University of Idaho, on "The Buyer's Sense of Sight and Taste and Their Commercial Value." Professor Elliott spoke of the importance of placing the various varieties of Western apples on the market in their season, and labeling the boxes as to when their contents are at their best for eating and cooking.

Dr. Granville Lowther, of North Yakima, editor of Fancy Fruit, delivered the principal address of the second day, taking as his subject "Fruit and Fruit-Growing; Its Effect on Mind and Morals," and saying among other things: "In the agitations which are inevitable and the discussions that must come, no class is so favorably circumstanced for intelligent, conservative leadership as the horticulturist. He is a worker, but not a wage slave. He is a capitalist without luxury. He is a

grade, while the quality of the product is overlooked, adding: "To put the product of the West on the European market we need men abroad to reach the interiors of the countries, as I find that there are very few samples of the American product to be found there. Men should be at the exchanges to look after the distribution of the apples, and to see that they are not all taken to one place by one shipper. Men also are needed in these centers to educate the people to buy for quality rather than grade, which will create a market for the best product of our orchards."

Other speakers were Enoch A. Bryan, president of the Washington State College, who spoke on "The Educational Needs of the Country Life," and advocated community education, and H. L. McIntyre, C. E., Spokane, discussed "Practical Irrigation" at length. He

it will be possible to stamp out the dreaded blight in many localities. Water and moderate heat are most conducive to its growth, but in California, where the orchards may have been overflowed by the rivers, it has been possible to save many trees by careful work. The cleaning of the tools used in cutting out the diseased parts can not be watched too carefully, as it is often due to this that whole orchards are killed. A solution of corrosive sublimate, or mercuric bichloride, is best for washing the tools. The best time to do the work of cleaning the orchards is in the fall and winter, before the sap begins to flow, as it is from the sap that the germ must obtain its nourishment."

Professor J. Shirley Jones, chemist of the experimental station in the University of Idaho, spoke on "The Soil and Its Relations to Fruit Growing," saying



that the grower who understands how to put back into the soil that which the tree takes out is working at a great advantage over the grower who does not know these facts. J. M. Brown, special horticultural inspector of North Yakima, recommended the black leaf dip as a suitable spray for combating the woolly aphid, which does so much damage in the orchards. The plan on which this spray of tobacco juice works is based on the fact that the gas of the juice in evaporation is sufficiently strong to kill the aphid. This plan is new, he said, and has only been tried at a few of the experiment stations in the country, but from the tests made thus far it promises

At the morning session there were papers by William P. Sawyer, of Parker, Washington, on "The Growing, Grading and Packing of Select Bartlett Pears;" Professor W. S. Thornber, of the Washington State College, on "Commercial Apple Culture in Washington;" Professor R. Kent Beattie, of the Washington State College, on "Apple Scab: Some Experiments with Sulphur-Lime Wash," and J. L. Dumas, of Dayton, Washington, on "Overdoing the Business." Mr. Dumas said there are two ways by which this may be avoided: First, by discouraging the planting of apple trees, and secondly, by educating the people to use the apple as a food

enhance the value of the apples when put on the Eastern and foreign markets.

The delegates and their wives and daughters were frequent visitors at the National Apple Show, and evinced great interest in the displays from various parts of the country.

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IT often happens that publications devoted to a particular industry lose much of their value to Oregon readers because located at such a distance that they rarely treat of local conditions. This criticism cannot be made of "Better Fruit," the official organ of the Northwest Fruitgrowers' Association. It is



DISPLAY MADE BY THE WHITE SALMON DISTRICT, OPPOSITE HOOD RIVER, AT THE NATIONAL APPLE SHOW IN SPOKANE

to become one of the best methods of killing the aphid.

Professor A. M. Melander, of the Washington State College, outlined what has been accomplished in spraying for codling moth, saying that so thoroughly can spraying now be done that the outlook for the codling moth situation never seemed brighter to the apple raiser, adding: "It is our belief at the Pullman station that in a few years the codling moth can be eradicated, even exterminated, in our commercial apple districts." In discussing methods to destroy the codling moth the speaker said that the most successful one is based on the theory that if a poison can be introduced into the calyx of the flower the worm is killed thereby when he enters the apple by way of the calyx. This was tried in various ways, but was found to work most satisfactorily when a crook nozzle and tower are used so that the spray may be forced against the flower with such force as to introduce a portion of the fluid into the calyx.

The Spokane Chamber of Commerce entertained the delegates at a mid-day luncheon in Masonic Temple the fourth day. Frederick E. Goodall, president, welcomed the orchardists.

and increase its consumption, adding: "Let us do this, First, by improving the quality. Low grade stuff always retards consumption. Second, let us spread information in regard to the varieties, their comparative values for dessert and cooking, and the season when they are to be used; and, lastly, let us send drummers and practical demonstrators to foreign lands with the best we can raise, and thus make the use of the apple universal."

The closing session was occupied with the election of officers and the reading of addresses by H. M. Bartlett, of Kennewick, Washington, on "The Columbia River Early Fruit Belt;" W. C. Pendleton, of Seattle, Washington, on "Fruits for the Market and Marketing;" by W. H. Paulhamus, of Puyallup, and E. H. Shepard, editor of "Better Fruit," of Hood River, Oregon, on "Short Talks on Organization and Marketing." Mr. Shepard recommended that the grower do a strictly f. o. b. business and leave out all speculation, as it is by this way that many lose thousands of dollars each year. He also suggested that a box of uniform size be selected and used in all orchards, as it would greatly

published at Hood River, and during its three years of publication has grown to be considered an authority on horticultural subjects. The October number is filled with topics of interest to the up-to-date fruit grower. "Cherry Growing in the Willamette Valley," "Development of Yamhill County," "Walnut Industry in Yamhill County," and "Fruit Growing Industry on the West Side," are subjects of particular local interest. "Better Fruit" should be in every Washington County home, and the moderate price of subscription, \$1.00 per year, places it within the reach of all. Mrs. W. C. Graddy, of Cornelius, Oregon, is the local agent, to whom subscriptions should be sent.—Hillsboro Independent.

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IN the last month we have received foreign subscriptions from Buenos Ayres, South America; Canton, China; Culebra, Panama; Las Cascadas, Panama; Lenzburg, Switzerland; Seoul, Asia; two from Korea; Japan, and one from the University of London, South-eastern Agricultural College, Wye, Kent. It looks like "Better Fruit" was growing in foreign countries as well as in America and the Northwest.



## A FEW FACTS CONCERNING PRACTICAL IRRIGATION

BY H. L. McINTYRE, SPOKANE, WASHINGTON

**D**ON'T irrigate too much. Over-saturation checks the growth of plants and trees by lowering the soil temperature and at the same time completely shuts out the air. This practice takes money out of the grower's pocket. Roots, like human beings or anything else that breathes, must have air for life and growth. The water-holding capacity of soils run from forty to sixty per cent of the total solid volume, and forty-five per cent of the whole is about as much water as should be put on the soil at any time. The

how. To know these things the grower must first ascertain certain facts regarding the land before he is ready to irrigate practically and intelligently. The speaker grouped them as follows:

First—The depth of the soil.

Second—The relative position of top and subsoil.

Third—Slope of surface for drainage purposes.

Fourth—Slope and characteristic of subsoil for underdrainage.

Fifth—Percentage of moisture the soil holds stored, in its present condition.

variations in one-foot contours, or in squares of one hundred feet. This will always be extremely useful to any one in the distribution of water for irrigation.

"Fourth—Knowing the depth of your subsoil at all points and the surface slope, the relative slope of the two is apparent.

"Fifth—To ascertain the percentage of moisture the soil holds stored in its present condition, take the samples of soil you have in the sealed glass jars from your borings. Weigh each sample



APPLE DISPLAY FROM SUMMERLAND DISTRICT, OKANOGAN, B. C., AT THE NATIONAL APPLE SHOW IN SPOKANE, DECEMBER, 1908.

best results from the application of moisture on ordinary crops have been obtained by using twenty-five per cent of the water-holding capacity of the soil at planting, decreasing gradually to fifteen per cent, remaining at that point until the leaves are formed; then increasing quickly to forty per cent and allowing the water to fall rapidly to from twelve and one-half to fifteen per cent, and remain there during the fruiting and maturing period."

H. L. McIntyre, C. E., of Spokane, an authority on irrigation subjects, emphasized the foregoing points in his paper on "Practical Irrigation," read before the Washington Horticultural Association at its annual meeting in Spokane, December 8 to 12. He indicated that practical irrigation is scientific in form and covers a broad field in its many phases, and urged irrigationists to study dry farming methods, as well as read irrigation and farm journals, declaring that the first requisite to be a successful irrigator is to be a first-class dry farmer, adding: "If you can't dry farm, you can't irrigate." Mr. McIntyre said it is the practical side of irrigation that appeals to the farmer and orchardist and fruit grower. They want to know how much water to use, when to apply it and

Sixth—The water-holding capacity or amount of water the soil contains when in a state of complete saturation.

Seventh—The degree of fineness or grain of the soil.

"With these questions solved," Mr. McIntyre said, "the grower is ready to irrigate with some degree of certainty as to what the result will be; without the facts the grower occupies the position of the head of a mercantile house without his books and statements and invoices. To ascertain these facts is not a complex process, as you can see:

"First—The way to ascertain the depth of the soil would be to bore auger holes at short intervals over your tract of land. Bore one foot in depth at a time, pull the auger, save the soil and put it in a glass jar and seal it up to prevent the moisture from evaporating. Bore the second and third foot, and on down to the subsoil in like manner until you have a sample of each foot of soil.

"Second—The relative position of top and bottom soil you have ascertained by boring holes in the first instance.

"Third—If the surface slope is too level to determine by the eye, employ a surveyor to run levels over the ground and furnish you a map showing the ele-

separately, noting the part of the field from which it was taken, then dry each sample perfectly and weigh again. The difference is the amount of moisture in the soil, from which you ascertain the percentage of moisture in each foot of soil from the subsoil to the top.

"Sixth—The water-holding capacity of the soil may be determined by taking a box one foot square and one foot high with a fine screen for the bottom. The capacity of the box will be one cubic foot. Fill the box with soil, pour water on it with a sprinkler until the water drips off at the bottom through the screen. As soon as the dripping stops, weigh the box and contents. Then dry the earth and weigh again. The difference between the two weights gives you the amount of water the soil will hold in its water-holding capacity. The soil is a sponge, and you can only fill the voids with water. Having learned all the conditions, you know how much water it will require to bring about a certain percentage of moisture in the land you wish to irrigate. You know how it drains, whether it leaches down or runs off in the subsoil. You can ascertain at any time whether your percentage of moisture is too low or too high, also how deep you can store



water in the soil, and know how much it takes to wet it one foot down.

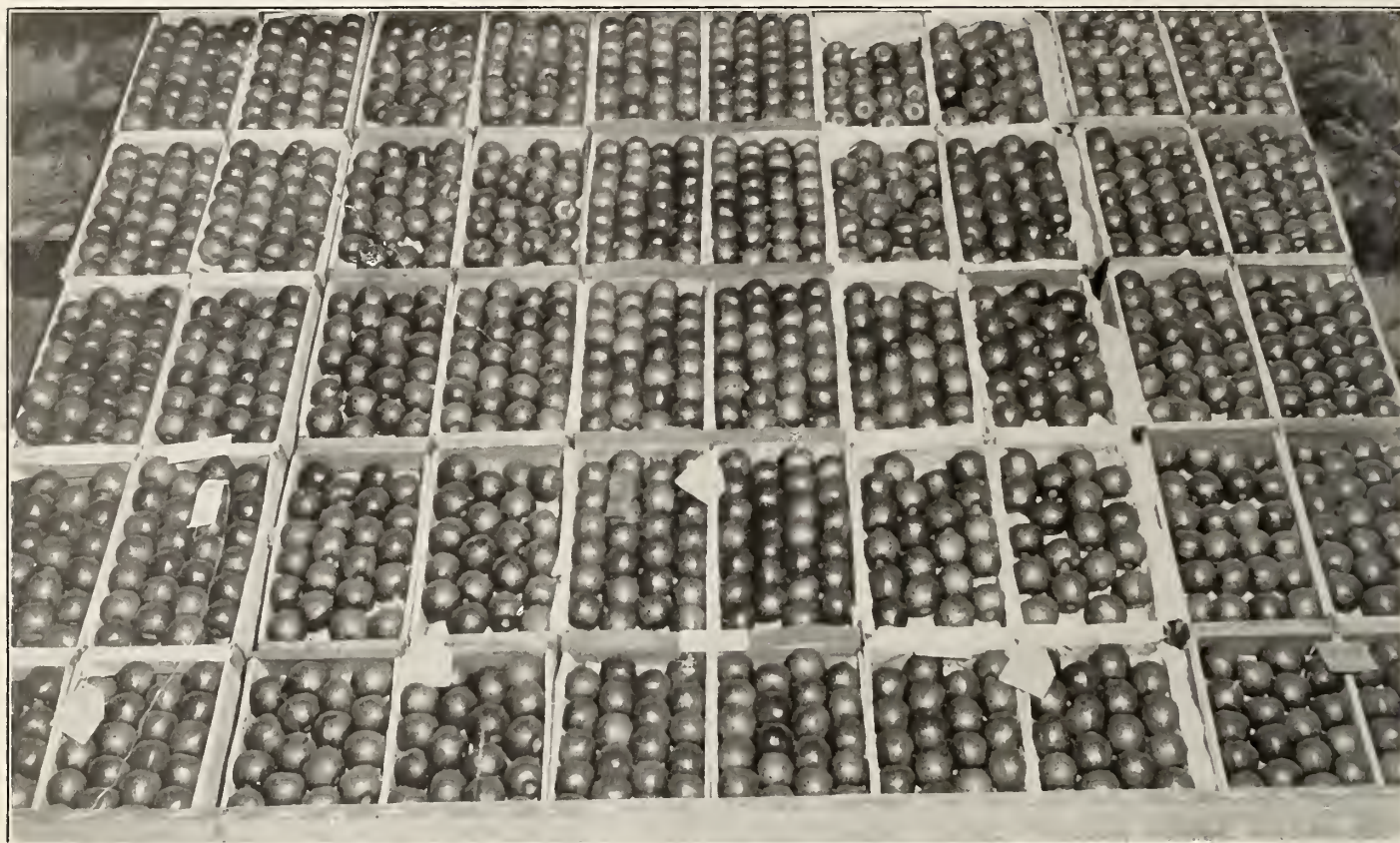
"Seventh—When you begin to experiment you will find that the saturating capacity of soils, even in the same field, vary greatly. When the soil is so full of water that the air is shut off, no new roots are formed, and no new water is taken up, and as a result the growth suffers. The soil requires air and sun as well as moisture.

"Shallow soils with gravel or open subsoils leach the moisture rapidly and there is less danger of over-saturation, but the continual pouring of water

who will take the trouble to apply his water to crops scientifically.

"The most economical method of irrigating land and at the same time one that gives the most complete control of the water is the pipe system, delivering water under pressure to each tract of land. Pipe lines are used in California for surface and subirrigation systems. In some cases as high as 1000 acres are watered with a flow of one cubic foot per second. In Washington, under the present open ditch system of irrigation, two hundred acres with this amount of water would be above the average.

people use three to four times as much water as is necessary and do a good deal of harm to their soil and also to the crop by an unbusinesslike and really ignorant use of a valuable quantity. The soil is a sponge, which will only retain a certain amount of moisture. If more water is supplied it simply leaches down and is lost or runs away, carrying with it a fertilizing element of the soil which is in solution, and only those which are in solution are of any value to plant life. The principal value of water is to make the fertilizing element soluble.



TOUCHET VALLEY APPLES, GROWN BY J. L. DUMAS, DAYTON, WASHINGTON, EXHIBITED AT THE NATIONAL APPLE SHOW, SPOKANE

through such soil will also carry away the fertilizing elements which are in solution and soon deplete the soil. Find out how much water your soil will hold in suspension and irrigate accordingly. The soil is a chemical laboratory and you are the chemist. The soil must have moisture, air and the heat of the sun to keep the chemical action at work making plant food. When you have too much water in the soil there is no air, hence no chemical action. With too much air there is no moisture and no chemical action. With proper moisture and cultivation the chemical action is complete, the capillary attraction bringing up the moisture from the lower levels to the top mulch. Here the sun and air manufacture the fertilizing elements and the next rain or irrigation washes them down to be taken up by the roots. The process repeats itself without end, so long as we water and cultivate properly.

"Cultivation is more important than irrigation, and in the arid regions one is of little use without the other. Don't overlook the fact that a weed is a pump and that it draws water out of the soil at a rapid rate. Of course it is difficult to control exactly the amount of moisture, but a great deal can be done in this direction and will amply repay any one

"Where water is spread over the land in open ditches, the ditches should be close together and large enough to carry water in big heads. By using the large heads you can irrigate the ground more rapidly, thus saving in the quantity of water wasted by seepage, and also have better control of the percentage of moisture you wish to put in the soil. Under long canals where there are numerous users of water or where the water is divided into several heads, the waste is very large. The soil is over-saturated and in many cases the land is ruined.

"The system of delivering water to individual users in a constant flow of small rivulets is a bad practice. The time flow system would be much better, delivering the water in large heads for short periods. Generally sixty to seventy per cent of the water diverted from streams by open canals and distributed by lateral ditches is lost before it is stored up in the soil for use by the vegetation. Water is too valuable to allow this kind of waste.

"In the Inland Empire we find the amount of water used in different districts runs from one half to four feet the acre, but why the growers use this amount of water few, if any, seem to fully understand. The fact is, most

"Greater irrigation would work wonders in a large portion of the arid belts. The question of pumping water for irrigation is a problem of the present time in irrigation development. The opportunities for gravity irrigation are largely exhausted. There has been in the past, and is yet, a general prejudice against pumping. All over the arid region will be found abandoned pumping plants, and when you inquire the cause you get but one answer, 'It costs too much to pump the water.' The trouble is not with the pumping system, but with the system of pumping. The cost should not be more than \$2 an acre, but there are scores of instances where it cost from \$12 to \$14.

"Water wheels are a crude means of getting power, and give only a fraction of the power of steam. Taking the facts into consideration I may say that the windmill is an ingenious contrivance, from an irrigation standpoint, to waste power and money as a general rule. However, where the lift is low, wind conditions favorable and a natural, inexpensive reservoir available, a small tract of land may be watered, but in 99 cases out of 100 it is a delusion and a waste of money."



# GOVERNMENT TO SAVE THE PHOSPHATE BEDS

BY H. C. RIZER, WASHINGTON, D. C.

**T**HE first tangible result from this session of the National Conservation Commission has been in favor of the agricultural interests of the country, and the action in question is of widespread, national significance.

The report prepared for the Commission by the United States Geological Survey on the phosphate consumption and supply of the United States showed such a startling condition of affairs that vigorous steps were immediately taken

no method of preventing exportation from the Eastern phosphate fields, it is believed to be possible to prohibit export of the Western phosphates, since they are found largely on Government lands. This Western field embraces the largest area of known phosphate beds in the world, and it is unquestioned that it is absolutely necessary to utilize these deposits solely for the benefit of the farms of the United States.

can phosphate is needed for American farm lands. The following figures show the steadily increasing production of phosphate rock in the United States:

## Phosphate Production in United States

| Year | Tons      |
|------|-----------|
| 1890 | 510,499   |
| 1900 | 1,491,216 |
| 1905 | 1,947,190 |
| 1907 | 2,265,343 |

Of the 1907 production, 900,000 tons, or about forty per cent, was exported.



AN IDAHO EXHIBIT AT THE NATIONAL APPLE SHOW, SPOKANE, MADE BY PROFESSOR L. F. HENDERSON OF MOSCOW, IDAHO

by the Government, the President ordering the withdrawal from entry of the extensive area of phosphate lands recently discovered in the Western States. The Geological Survey is engaged in the investigation and examination of mineral deposits, but in this instance its work has resulted in the adoption of provisions which are of vital concern to every farm and every farmer in the land. The description of the lands withdrawn, which are situated in Wyoming, Idaho and Utah, was furnished by the Survey as a result of a preliminary examination of the area, and further geological work will be prosecuted as soon as practicable, in which the lands will be carefully classified and those found to be actually underlain with phosphate will be held, pending action by Congress.

At the present rate of production, it was stated, the known available supply of high-grade phosphate rock in the United States will last only about fifty years, and it was pointed out that a large proportion of this is exported for the benefit of foreign farm lands and at the expense of our own. While there is

Phosphoric acid, as is of course well known, is one of the three substances which must exist in the soil to insure plant growth. President Van Hise, of the University of Wisconsin, stated that it had been shown as the result of agricultural experiment station work in Wisconsin, Ohio and Illinois, that in fifty-four years certain cropped soils of those states have been depleted of one-third of their original phosphoric acid—1080 pounds, or twenty pounds per acre annually. Applying this rate of exhaustion to the 400,000,000 acres of cropped land in the United States, it would require 12,000,000 tons of phosphate rock annually to merely offset the loss, or as much as the total amount which has been mined from the Florida deposits.

The rapid rate of increase in the domestic use of phosphate, taken in connection with the limited supply, is a matter sufficiently serious; but the feature which should arouse the greatest concern and call forth the most vigorous protest is the exportation of nearly half the output. From this exportation the United States receives practically no benefit, whereas every pound of Ameri-

The phosphate rock of South Carolina is nearly exhausted, and the Florida deposits, once popularly considered practically inexhaustible, have reached their maximum production. They will soon begin to decline. Tennessee has comparatively large deposits, but this field alone would at the present rapid rate of increase in production last only, according to the Government geologists, eleven years. There is some phosphate rock in Arkansas, but it is of low grade. The large deposits, therefore, of the public land states must furnish the most of the phosphate of the future, and to insure the enrichment of our own soil from our own phosphate beds some methods must be devised to prevent the profitable business of its exportation.

This, it is believed, can be done only by the Government's retaining title to the public lands underlain with phosphate and providing for their development by leasing under terms which will forbid exportation. The lands have therefore been withdrawn by the Secretary of the Interior, as an emergency measure, and will be reserved pending action by Congress.



# PREPARATION AND USE OF SULPHUR-LIME WASH

BY A. L. MELANDER, WASHINGTON AGRICULTURAL EXPERIMENT STATION, PULLMAN, WASHINGTON

**T**HE sulphur-lime wash was originally a sheep dip. It is now used as a specific for scale insects, and for many species such as the San Jose scale and the oyster shell bark louse, it is more effective than any other spray. For those insects that place their winter eggs on the bark, such as the red spider, the apple aphid and the elm leaf louse, a winter spraying of sulphur-lime is a more dependable remedy than summer spraying of other contact insecticides. This wash is useful also for the root form of the woolly aphid, for the bud moth and peach moth, and has some preventive value for such insects as the flat-head borer and other bark and trunk borers. There is a growing use of sulphur-lime as a fungicide. It is widely used for mildews, peach leaf curl, moss and lichens, and lately there are indications of its value in controlling apple and pear scab as a substitute for Bordeaux mixture, which latter is apt to scorch the fruit.

## Formula

Sulphur ..... 1 pound  
Fresh lime ..... 1 pound  
Water, to make ..... 4 gallons

After slaking the lime add the sulphur and enough water to allow easy boiling. Boil briskly until the sulphur has dissolved, which should take less than one hour. Strain, and add enough water to make the amount required. This is called the Piper 1:1:4 formula. It is given in small amounts for convenience, as the recipe can be easily adapted to any sized receptacle. Sulphur-lime wash is not sulphur and lime. It is a chemical combination of the two ingredients effected by boiling, and this is a distinct third substance, which has killing properties not possessed by either the sulphur or the lime. Sulphur-lime wash is difficult to prepare with uniformity

under ordinary orchard conditions. That is why many a grower has failed in using it. If the directions are carefully followed the resulting wash should be entirely efficient. It is best first to slake the lime, for otherwise the excessive

sulphur or sulphur flour is best for making this wash because it is much cheaper than flowers of sulphur. The disadvantages of using brimstone is that it takes longer to boil the wash, and long boiling is detrimental.

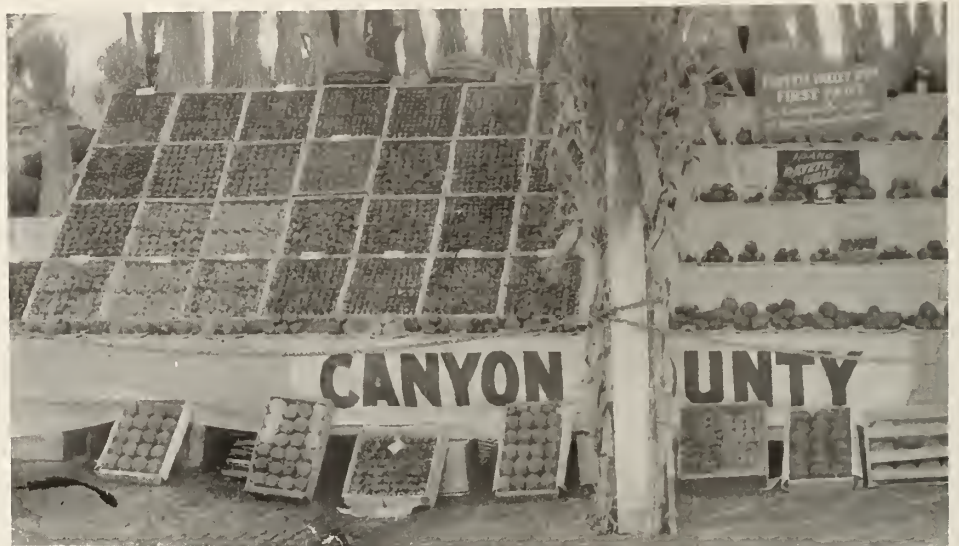


EXHIBIT OF CANYON COUNTY, IDAHO

heat of slaking may volatilize some of the sulphur, and at the same time produce a different chemical combination from that desired. Slaking lime is a process that must be carefully watched. Water should be added a little at a time until the lime is slaked to a paste. If too much water be added the lime will chill. If too little the lime will burn. Only a good quality of fresh lime will answer in making the sulphur-lime wash. Air-slaked lime will not do. Ground

The mixture of lime and sulphur should be briskly boiled with a little water until the sulphur is no longer visible, when the wash has become a reddish yellow color. This should take from thirty minutes to one hour. It is not advisable to boil longer than one hour, for a chemical change takes place on continued boiling which lowers the insecticidal value of the wash.

Sulphur-lime wash may be boiled in any iron vessel. The usual custom is to



BEAUTIFUL HOMES, HOOD RIVER VALLEY, OREGON



## SPRAY CALENDAR FOR SULPHUR-LIME SPRAY

| Insect or Disease   | When to Spray   | Remarks   |
|---|---|---|
| San Jose Scale.<br>Oyster Shell Bark Louse.<br>Elm Bark Louse.<br>Blister Mite.<br>Any Scale Insects or<br>Bark Lice. | Any time during the dormant season, but is more successful if used in fall or in spring.        | For bad cases of scale use a 1 to 10 or even 1 to 9. 1 to 11 will control and keep trees clean.   |
| Red Spider.<br>Green Aphis of Apple.<br>Plum Aphis.<br>Elm Leaf Louse.  | Any time during the dormant season.   | This treatment is for the eggs. It is more effective than to wait till the insects appear and then spray with kerosene emulsion before the leaves curl. |
| Cottony Scale.  | During dormant season.  | In some sections sulphur-lime is reported as not completely effective.  |
| Bud Moth.<br>Peach Twig Borer or<br>Peach Moth.   | Just as the buds swell in the spring.   | This will destroy the half-grown wintering worms when they open their cocoons on the twigs.   |
| Woolly Aphis.   | Whenever insects are noticed, preferably during the dormant season.                             | For the root form only; uncover the roots and apply to the soil.  |
| Flathead Borer.<br>Peach Tree Borers.<br>Bark Borers.   | In early June before the eggs are laid. Repeat if washed off.                                   | Use with great excess of lime, so as to whitewash the trunk.  |
| Red Spider.   | As a summer spray.  |   |
| Moss.<br>Lichens.   | When the leaves are off the trees.  | Use 1 to 9 or stronger.   |
| Apple Scab.<br>Pear Scab.   | First spray when blossoms show pink but have not opened. Second spray as soon as fruit has set. | This treatment is still in the experimental stage. Dilute 1 to 16 or weaker.  |
| Leaf Curl of Peach.<br>Peach Mildew.  | Just before the buds open.  | Add salt for curl.  |
| Mildew.   | When it appears on rose, gooseberry, etc.   |   |

provide a long, narrow wooden vat with a sheet iron bottom. This is bricked up for firing beneath and is fitted with a chimney at the rear end. This vat should be covered as much as possible during the cooking to insure greater uniformity of the wash. It is well to stir ingredients occasionally, especially at the beginning of boiling.

When sufficiently boiled the contents of the vat should be strained into the spray tank and diluted with enough water to complete the formula. Straining is very important, as it prevents the clogging of the nozzles. A wire fly screen will answer for the strainer. It is not necessary to heat the water for diluting, as the wash is just as effective

cold. The hot wash sprays somewhat easier, but is more corrosive to the spray hose and is more dangerous to the operator in case of accidental uncoupling of the hose.

Many attempts have been made to prepare a self-boiling wash by using a large excess of lime and depending on the heat of slaking to effect the chemical change. Such washes are not successful and should not be tried. On a large scale the sulphur-lime wash is boiled by live steam. The main advantage of this method is that no stirring is required. When small amounts are needed the wash is usually prepared in an iron kettle.

Never use a copper implement in preparing sulphur-lime. It will be quickly corroded. Similarly the wash corrodes and tarnishes silver jewelry. If sulphur-lime comes in contact with any lead paint it will blacken it. This discoloration can be bleached by washing with hydrogen peroxide, but that is rather expensive. The bleaching will also be effected by the air, but it will require several months to do so. The pumps used with sulphur-lime wash must be washed out each night after using. Pumps with brass working parts will have a scaly crust formed over the brass after continued use. Brass nozzles are eaten out after several days' spraying, and a sufficient supply should be kept on hand to replace those worn out. Sulphur-lime will keep for several days. It is not necessary to use it fresh each day, but it is advisable not to keep it too long.

The horses as well as the men who spray should be protected from the spray during the time of application. This is done by blankets and hoods of gunny sacking or canvas. Sulphur-lime is caustic to the skin and may produce ulcers. It is a good plan to anoint the



LOGANBERRY FIELD OF A. M. ASPINWALL, BROOKS, OREGON





GEORGE C. ROEDING

Of the Faneher Creek Nurseries, Fresno, California. A great introducer of varieties. He believes that growers should try new and promising varieties

come in contact with carbonic acid gas, unless it is kept hot.

The sulphur-lime wash is sometimes stronger, as 1:1:3, or weaker, as 1:1:5. The stronger wash is used for moss on the tree trunks. There is no need of using the stronger wash for scale insects, as the 1:1:4 formula is completely effective. For even the San Jose scale solutions weaker than 1:1:5 have been used with success.

From chemical considerations alone, but one-half pound of lime should be used for every pound of sulphur. This makes a clear liquid which is just as strong, but which scarcely shows up after the spraying. The 1:1:4 formula doubles the necessary amount of lime to whiten the spray. In case of scales locating on the fruit of whitewashed trees the chemical 1:½:4 formula would be preferable, but requires more watchful spraying.

The sulphur-lime wash is a winter spray. It should be used only when the plants to be sprayed are dormant. If

applied while trees are in leaf the foliage is burned, but will usually recover. If applied at the beginning of blossoming it may stop the setting of fruit. Sulphur-lime spraying after growing has begun is not completely effective for the San Jose scale.

For such insects as the San Jose scale, which is a formidable pest because of the rapidity of its breeding, every pinhead of surface on every twig and branch must be covered by the spray.

If even a few insects are missed the pest may quickly develop as numerous as before. To insure thoroughness of application some growers spray twice, sometimes in fall and repeated in spring, and sometimes twice in spring. Ordinarily with care a single spraying can be so thorough as to kill every scale insect. It is customary for most growers to spray during February or March. Many scales live in cracks in the bark. Such places are difficult to reach. Therefore pressure spraying with Bordeaux nozzles is better than the low pressure mist obtained with Vermorel nozzles. Do not be afraid to drench the trees, but trim and prune before spraying for economy of material. Spraying in a half-hearted way is generally no better than no spraying at all.

Although sulphur-lime is a most effective winter wash, many substitutes for it have been tried. Sulphur-potash and sulphur-soda are similar preparations but are much less valuable. Where the proximity of painted buildings makes it undesirable to use the sulphur-lime, whale oil soap, two pounds to one gallon of water, may be substituted as an insecticide. There are certain proprietary miscible oils that serve the same purpose.

At least to the inexperienced grower who has but little spraying to do we commend the concentrated ready-made sulphur-lime preparations obtainable in the market. When properly diluted they are more uniform than the usual farm product and are hence more dependable. These washes are prepared without any excess of lime and require some lime if they are to be compared with the Piper wash. But as they are prepared under unvarying conditions they are superior to much of the home-made sulphur-lime that is used.

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Chicago, December 15, 1908.

Stark Bros. Nursery and Orchard Company,  
Louisiana, Missouri:

Gentlemen—Replying to your recent favor, we are sending you by express, two boxes fancy Delicious apples, from Wenatchee, Washington. We have a nice little bunch of these Delicious, and you had better order from us as soon as you find convenient, what you can use.

These Delicious, from the Wenatchee Valley, are the finest apples for quality and flavor we ever ate, and all our trade praises them very highly. You certainly have named it correctly, because the quality is all the name implies.

It sells for the highest price of any apple in our market. All our trade that has purchased any of these apples are delighted with the quality and flavor. Yours truly,

Gibson Fruit Company.  
By N. G. Gibson.

hands and face with vaseline before spraying.

Originally the formulas for the wash contained salt. This has no other use than to cause the spray to adhere a little longer. Portland cement is sometimes used for the same purpose, as is also an excess of lime. Such adhesives should generally not be used. Often it is an advantage not to keep a coating on the twigs during the summer, since scale insect then locate on the fruit and foliage in preference to coated twigs. But if the trees bear no fruit this coating might be advantageous because any scales locating on the foliage would die at winter.

The so-called Oregon winter wash is an endeavor to combine Bordeaux mixture with the sulphur-lime. The addition of blue vitriol to sulphur-lime destroys sulphur out of the wash in proportion to the amount of vitriol added. This of course reduces the value of the wash. Sulphur-lime should not be mixed with Paris green, arsenate of lead or Bordeaux mixture.

Cold sulphur-lime wash is rapidly decomposed into chalk and sulphur by carbonic acid. When boiling hot this does not take place. Hence the wash should not be used in a gas spraying machine where it may



A THREE-YEAR OLD PEACH ORCHARD NEAR WHITE SALMON VALLEY, WASHINGTON



# FRUIT GROWER TELLS HOW TO PRUNE TREES

BY F. WALDEN, HORTICULTURE EDITOR OF "THE RANCH," YAKIMA VALLEY, WASHINGTON

**T**HE object of pruning is not, in the main, to make your trees more fruitful. A tree will bear well if never touched with a knife or saw. It is true that the aim of nature in producing fruit is not exactly the same as that of the fruit grower. Nature aims to produce seeds, that is its one chief aim; but the fruit grower is not directly concerned about seed production. In fact, the fruit grower is delighted when he can produce fruit without any seed at all, if, in doing so, he does not impair what he seeks in fruit production. Take an apple, for illustration. The seeds are surrounded by a hard, bony substance called carpels; outside of these carpels is the fleshy part of the fruit, called the pericarp. This latter part of the fruit, that is the pericarp, is what the fruit grower wants. Now the best seed for planting is grown on wild native stocks, where no pruning is ever done, but in such cases the pericarp is not thick and is often tough and leathery, but that is all that is needed to protect the carpels. So nature's method, without pruning at all, serves the best where simply reproduction from seed is desired. But the fruit grower wants the thick, luscious pericarp, even if he gets it at the expense of the seeds. It is well known that some of our finest apples produce but few seeds, and many of these will not grow. The finest roses produced by the gardener have no seed at all, the seed being sacrificed to get the magnificent flowers. Then, it is true that we war somewhat on nature's plans when we prune and cultivate to get our best fruits and flowers. The object in pruning is not to get more seeds and more fertile ones, but to get an enlargement of the pericarp, and this is secured at the expense of seed production and fertility.

From all this we learn that unpruned trees will produce plenty of seeds that will grow, but the part of the fruit that we prize most highly will be poor. Our aim in pruning, then, is to concentrate the elaborated sap in the development of the pericarp. In this way we get our largest luscious apples, pears, peaches,

plums and apricots, but often no seeds at all, or few that will grow. With this knowledge in mind, let us ask ourselves this question: How can I prune this tree so as to make the fruit larger, better colored and better in quality? To properly understand how to answer this question we must know that sunlight and heat are important factors in the development of fruit. If, then, we want size, color and quality, we must let in the sunlight. The sunlight must reach all the leaves as well as the fruit. The leaves cannot transform the sap into the necessary ingredients to make luscious fruit unless there is sunlight. Any country that has a great deal of cloudy weather in summer time cannot produce the highest grade of fruit. Even if size is attained, the quality, as well as the appearance, cannot be the best. If we were to cover a tree with a blanket and thus keep out the sunlight, the fruit would have poor color and would be insipid. Too many leaves will act as a covering to at least part of the fruit. So then we must cut away the excess of limbs so the sunlight can get all through the top of the tree.

But we must train our tree so that it will have an open top when loaded with fruit. It is one thing to have an open top when the tree

has no fruit on it, and quite a different thing to have the top open when all the limbs are bent with a load of fruit. Just at this point many make their worst mis-



C. I. LEWIS, PROFESSOR OF HORTICULTURE, AGRICULTURAL COLLEGE, CORVALLIS, OREGON. Recognized as one of the ablest horticulturists of the Northwest, who is doing work of inestimable value for the fruit industry of Oregon



INTERIOR OF PUYALLUP AND SUMNER FRUIT GROWERS' ASSOCIATION WAREHOUSE SHOWING SLATTED FLOOR AND CRATES PILED TO GIVE FREE CIRCULATION OF AIR

take. The idea has been very prevalent that an ideal top for an apple tree is one with a straight stem in the center and branches starting from the sides at intervals of a few inches and on different sides. Such a top looks fine on paper, or fine in the orchard when no fruit is on the tree, but wait till this top is heavily loaded with fruit and it will be found folded up like an umbrella when you partly close it. Such a top becomes much thicker when loaded than when empty. To avoid this we must train our top from the time we plant our tree in the orchard until its form is well established.

A far better top than the one just described is what is known as the goblet-shaped top. To secure this we should, at the time we plant our tree, cut the main stem off where we want to form the head of the tree. From three to five limbs should be allowed to start out on different sides of this cut-off trunk. If these limbs are properly attended to, the tree will be somewhat in the shape of a goblet. These limbs, when loaded with fruit, will not bend together, as in the case of the straight central stem top, but will spread



apart, thus exposing a greater surface to the sunlight. These limbs must not be allowed to grow one above the other, or they will bend together and not part. Once I was a convert to the idea of a central stem top and found it ideal on paper and when standing in the orchard without fruit, but a miserable failure when loaded with fruit.

Another thing that must be kept in view in pruning, is to see that the tree is so shaped that it will stand up well under its load of fruit. A forked tree is very apt to split; hence, avoid forks. If by chance or oversight you have a tree with two main prongs forming the top, cut one off, and the earlier in the age of the tree that is done, the better. The same principle applies to the principal laterals that form the top—avoid forks or you will have splits. In cutting off the limbs be sure to cut close up to the limb that is left. The reason for this is that the elaborated sap comes down from the leaves on the outer part of the limb, and the bast, as it is called, will much better form about a cut on a line with the bark than if it is out from this current at the end of a stub.

When we have thought over what I have given above, it will be found that there are two things to keep in view in pruning, viz., shape and to let in the sunlight and air. With these objects accomplished we have done all we should aim at in pruning a fruit tree. Sometimes we prune to induce fruitfulness.

This is not very often necessary in the Pacific Northwest. Here our trees bear too early and too heavily. This is especially so where we irrigate and check up our irrigation in August. This withholding of water tends to the development of fruit buds. It is now well known that in the early stages of bud formation there is no difference between fruit buds and leaf buds, but they are identical in structure. The checking of growth in the latter part of the season tends to the formation of fruit buds, but, on the other hand, the application of water so as to start a late growth, will change many of the fruit buds to leaf buds. In the fall of 1906 we had a leaky flume, where water escaped from the middle of August to the first of November. The ground around some half-dozen Rome Beauty trees was kept wet and the trees made some growth. These trees were destitute of apples in 1907, but all the others of the same variety were loaded with fruit and the fruit sold very high, so we paid something like \$100 for our carelessness. Now, by summer pruning, we check the growth of trees and thus increase the formation of fruit buds. This kind of pruning is not often needed in irrigated orchards, and we can bring about the results aimed at by checking up the water supply. Where rainfall is depended upon, then the summer pruning may do some good with the late bearers.

O. W. BUTTS

General Commission

Omaha, Nebraska, January 1, 1909.

E. H. Shepard, Hood River, Oregon:

Dear Sir—Your letter of 28th received. Find enclosed our advertisement for "Better Fruit," which we consider the best paper of its kind issued in the United States.

We have heard comments from others, strong in good words of praise. We read with much interest every issue and welcome "Better Fruit."

Yours truly,

O. W. Butts.

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Washington, D. C., December 26, 1908.

Mr. W. P. Stark, Stark Bros. Nursery and Orchard Co., Louisiana, Missouri.

Dear Sir—Your courteous favor in sending to this office a box of Hood River packed Delicious apples, is greatly appreciated. The apples were perfect in pack and perfect in condition. The apples were uniform in size and beautiful in appearance as well as good in quality. I do not remember to have seen specimens of Delicious more perfectly grown than these.

There is a bright future for the growing of this variety and I consider it one of the best of the varieties that are grown in Oregon.

Thanking you for submitting the specimens, I am, with the compliments and best wishes of the Christmastide, Yours very truly,

G. B. Brackett, Pomologist.

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Lenzburg, Switzerland, November 15, 1908.

Better Fruit Publishing Company:

I got your receipt of the 30th September, 1908, but not just now your "Better Fruit." Please send it regularly. Yours truly,

Gustav Henckell.

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**Wanted**

Position, nursery, orchard, practical. Recommended—J. Benton, Kettle Falls, Washington.



WENATCHEE, WASHINGTON, DISPLAY AT THE PAN-AMERICAN EXHIBITION, BUFFALO, NEW YORK, SHOWING THE CONTRAST TO THE SPOKANE EXHIBIT OF DECEMBER, 1908



## THE SELECTION AND PLANTING OF PEACH TREES

ACCORDING to W. R. McIntosh, horticultural writer in the Pacific Rural Press, the following list of peaches is recommended. First the freestones:

Order of ripening, Fosters first, Elbertas and Wheatlands second, Muirs and late Crawfords third, Lovells fourth. Canning quality, Lovells first, Muirs and late Crawfords second.

Elbertas, Wheatlands and Fosters were rejected for canning purposes. In drying quality the Lovells and Muirs rank equally and head the list; Elbertas and late Crawfords rank equally and are second; Wheatlands third and Fosters fourth. As to bearing qualities, the Lovells, Muirs and Elbertas rank equally and are first; Wheatlands and late Crawfords second; Fosters third. That completes the estimates on freestones.

### Discussion of Freestones

The late Crawfords have no first, but they are second for canning, for drying and for a good yield as a bearer. Being late in ripening is a good point in their favor. The late Crawford is, therefore, a good all-around peach and should take high rank among growers.

The Foster is first in ripening; earlier than any other peach in the list. It was rejected for canning purposes altogether; is third as a bearer, and fourth in quality as a drying peach. Therefore the Foster has a very poor record and should be refused by growers.

The Wheatlands stands second in the order of ripening, has no place in the canning list, is third as a drier and second in quality of bearing. It is, therefore, superior to the Foster, but should not rank high with growers.

The Elberta ranks second, with the Wheatlands or near it, has no place in the canning list, is second in quality of drying, and among the first as a heavy bearer. The Elberta is, therefore, a good peach and should rank high in the estimation of growers.

The Muir ripens third, according to our record, among the six varieties under consideration. That is a point in its favor. As a canner it ranks with the seconds. That is against it. It is, however, among the first as a drier and in quantity of bearing. These things place the Muir on very high ground, and it should be sought after far and wide by growers.

But the crown and the glory of the freestone family is yet to be considered. It is the splendid all-purpose Lovell peach. It is the latest of its class in ripening, and is thus enriched by slow maturity in a hot climate. Its flavor is unsurpassed. Its pulp is pure white throughout, while its rival, the Muir, is red at the pit. The Lovell "keeps well," and is, therefore, a good shipper, in a green state.

Seller's Orange Cling heads the list and the Heath is at the bottom. In the order of ripening the Tuscan comes first and it ranks first, with Runyon's and Phillips' Clings, as a canning peach. It ranks second, along with Seller's, Runyon's and McDevitt's, as a heavy bearer. Following the Tuscan in the order of ripening come Seller's, Runyon and McDevitt's.

Runyon's Orange Cling comes in with others as seconds in ripening period. It is one of the three firsts as a desirable canning peach and is in a class with three others as a bearer. Its record is, therefore, most excellent, and it should be zealously sought after by growers.

McDevitt's has an excellent record. It is second in ripening period along with Seller's and Runyon's. It is also

second as a canning peach and as a bearer.

The Heath has a worse record here than it deserves, according to my judgment. It stands fourth in ripening and third in both canning and bearing qualities. This record, therefore, puts it in the "doubtful list," to say the least.

The Salway's record is fourth as a canning peach and as a bearer. I doubt the accuracy of the record, and I am in favor of giving the Salway the benefit of the doubt.

Phillips' Cling is the latest in ripening and is in the first rank as a canning and bearing peach. It is the most valuable peach, pound for pound, owing largely to the fact that it reaches the cannery at an "easy time" about help and aids often in closing a successful season among the canneries. It is, of course, sought for



PEAR ORCHARD OF W. P. SAWYER, PARKER BOTTOM, YAKIMA VALLEY



by growers everywhere, owing to the ever increasing demand for it and its constantly advancing price.

#### Hints on Planting.

The orchard land should be thoroughly plowed and harrowed before the trees are planted. In addition to this a sub-soiler should follow the plow to loosen up the subsoil to a depth of at least eighteen inches beneath the bottom of the furrows. This will insure a splendid deep-root system and a rapid and healthy growth of the trees.

Where irrigation is required some attention must be given to grading, and if the land be low and subject to sub-irrigation, careful attention must be given to preparation for drainage. Peach trees will not survive water in winter, nor a soaked soil during the spring and summer.

If the land be very dry, considerable water should be used at planting and the soil should be well tamped about the trees.

Great importance attaches to the depth of the opening which is to receive

the young tree. The usual instruction is to lower the tree to a depth corresponding to its former place in the nursery.

#### Pruning Peach Trees

Do not cut back your trees until they have been planted out in the orchard; then cut to about the uniform height of eighteen inches for properly grown nursery. The young trees should be carefully pruned before planting, leaving lateral branches about three inches in length. In case the buds, therefore, do not make the usual start in the spring, following planting, on the main body of the tree, the buds on these laterals will. If the buds on the trunk start properly then these small branches may be clipped off.

Nurseryman Roeding asserts that this is a very important point, particularly with peach trees, and if followed by planters generally would, in many cases, obviate the necessity of growing a new stem where the buds happen to be blind and fail to start out at the proper height from the ground. From three to five branches should form the head of the

tree, and these should be cut back to twelve inches the first winter after planting and distributed in such a manner on the body of the tree as to prevent crowding and the development of forks.

The aim of the pruner should be to open up the tree and cut out any central leaders. The second year a severe heading-back again should take place, not leaving over two feet of the new growth. Thin out the numerous small laterals, allowing only a few to remain, and remove any which are close to the point where the framework branches have been topped. If such laterals are allowed to remain the new growth in the spring will force its way through them instead of forcing buds out where they belong, making an ugly crook in the tree. The third season from two to three shoots should be allowed to start from the branches of the year before, and they in turn should have their growth shortened about one-half. The head of the tree will in the third season be fully formed and a small crop of fruit may be expected. The fourth year the multiplication of new branches should be allowed to develop from those of the year before in about the same ratio, at the same time following out the shortening-in method which it will be necessary to practice every year.

Peach trees should be pruned in the dormant season, and, if possible always ahead of spraying. Thinning should be done when peaches are the size of quail eggs, to save the trees from the draught required in forming pits. After one thinning, which in 99 cases in 100, will not be severe enough, thin again, and then as the peaches develop go into your orchard and thin the third time. Even then you will have "culls" because you did not thin sufficiently.

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I. GOLDBERG

Wholesale Dealer, New York City

117 E. Broadway, December 10, 1908.

Better Fruit Publishing Company:

Gentlemen—I have just finished reading "Better Fruit." I am so impressed with its superiority over all other fruit papers that I could not resist writing you and telling you about it. From a horticultural standpoint of view, the articles in it are superior to any that I have ever read in any of the so-called fruit papers, and I notice that "Better Fruit" is not edited from a railroad land office either, and from an artistic point of view it is as nice a printed got up paper as any published.

The prize certainly belongs to "Better Fruit" in setting an example what a fruit paper should be. I remain, yours very truly,

Joseph M. Goldberg.

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UTAH AGRICULTURAL COLLEGE  
EXPERIMENT STATION

Logan, Utah, January 5, 1909.

Mr. E. H. Shepard, Hood River, Oregon:

Dear Sir—Replying to your letter of the 31st ult., in which you ask my opinion regarding the Elberta peach, I beg to present the following:

Elberta is the most extensively planted peach in Utah. I believe it is safe to say that fully seventy-five per cent of the peach orchards here are made up of this variety. And there is reason for this. It is a variety which does exceedingly well. The Utah-grown Elberta may be equaled by some other sections but it cannot be excelled. Even the famous orchards of Georgia, Texas, Arkansas and Missouri cannot produce Elberta peaches which are finer in flavor, texture, size or good looks than the Elbertas of the Great Salt Lake Basin.

A new strain of this variety is just now being introduced from this state under the name of "Early Elberta." Last summer I saw this peach in an orchard alongside of Elberta. The Early Elberta was ripe and ready to be used, while Elberta was still hard and green. This early form is similar in every respect with the old Elberta, only it has the advantage of ripening a couple of weeks or more earlier.

There is a great advantage in this earliness, for when the early and late forms are planted in the same orchard, much of the strain and rush of the picking season is relieved by having the work spread over a longer period.

Very truly yours,

E. H. Favor, Assistant Horticulturist.



TREES LOADED WITH CHERRIES, THE DALLES, OREGON



# HOW TO HOE AND FERTILIZE THE STRAWBERRY

BY J. L. FARMER, PULASKI, NEW YORK

ONE of the most important items in strawberry culture is to know how to hoe the plants properly and also how to teach hired help how to do it properly. In this, as with all other things, there must be some system. I make it a practice to go out with the men and instruct each one in the proper handling of the tools and work with them for half a day or so until I know that they understand what is wanted.

Strawberries should be cultivated with the horse the day after they are set out, if possible, and lightly stirred with the hoe or rake or some other tool that will just loosen the surface soil, which has become somewhat baked or trodden by passing over it while putting out the plants. At this hoeing we aim merely to break the crust or surface soil to a depth of from half an inch to an inch. This opens the soil pores and sends the moisture to the roots instead of its passing off into the air. In a week or so the plants should be hoed again, and the men should be more careful at this time to get close up to the plants, stirring the entire surface. In about two weeks after they are set, the plants should be hoed very carefully. The cultivator should be run close up to the row, using the inch teeth, so that earth will not be allowed to pile onto the plants, as may be the case when wide teeth are used. We prefer to cultivate with the horse the day before we hand-hoe them. In hoeing, we aim to cut away the soil from the plants and between them with the hoe and then brush the little weeds and soil from directly around the plants out into the middles. Then we draw up fresh earth from the freshly cultivated middles up around the plants, a good deal the same way as corn or potatoes should be hoed the first time, drawing around the plants a little more earth than was taken away. In brushing close up around the plants, we use the hands and do not trust to the sharp hoe alone, as plants are liable to be chopped off if too close work is done with the hoe, and then it is impossible to get all the soil stirred and the weeds out with any tool. We also use the hand to remove any soil that may have fallen over the crown or heart of the plants. Plants will not do their best if soil is buried over the crowns or if the roots are somewhat bare.

We continue horse cultivation and hand hoeing at intervals of about a week until midsummer, when the runners begin to start. When these are allowed to grow they must be gathered up and placed on one side of the row while the soil is stirred up on the other side, then layered carefully about the parent plants. If the first two or three runners are not properly layered, they are liable to get on one side of the row, and thus grow an uneven row, or worse still, they may be blown about by each heavy gale that comes and never root. The writer has seen runners on neglected strawberry patches that had five and more plants to each runner and none of them rooted, merely a drain on the parent plant and no good done. When the runners are pretty thick and the young plants are forming on them all over the row, it is impossible to get among them with the hoe, and so we merely pull out the large weeds and throw earth from the middle among the runners and young plants, covering the tips of the runners and small weeds,

smothering the latter and facilitating the rooting of the plants. If one has a very small patch, or plenty of time, he can do more effective work with a small, short-handled tool, made by cutting an ordinary hoe down to a three-corner shaped tool and removing most of the handle. With such a tool one can work among the runners and small plants and kill all the weeds, and by stirring the soil more effectively, greatly stimulate the growth of the plants. In this way and by smothering them the mouse-eared chickweeds can be kept down.

The fertilizing of the strawberries goes hand in hand with the hoeing and cultivating. We prefer to apply a small quantity at different times rather than all at one time. As soon as the plants are set, we drop a small handful of commercial fertilizer between each plant and chop it into the soil at the first stirring of the hoe. We repeat this operation about once a month until the plants have been fertilized four times. After the first application we hoe the plants

first and then drop the fertilizer on the freshly stirred soil, allowing it to leach into the soil with the rains that follow. We do not like to apply commercial fertilizer or even well-rotted barnyard manure directly to the roots of the plants, but we think it should be put on the surface of the soil as close to the plants as possible.

The amount of commercial fertilizer that is necessary to apply depends upon the condition of the soil, whether naturally rich or poor. One can apply from five hundred to two thousand pounds to the acre. I should apply two-thirds of this while the plants were growing, as has been indicated, and the other third in the spring of the fruiting year just as the last snow is disappearing. It will then leach into the soil and give the plants a great impetus for fruiting. Either buy the chemicals and mix them yourself or buy a ready-mixed fertilizer analyzing as near like the following formula as possible: Four per cent of nitrogen, ten per cent potash and ten per cent phosphoric acid.



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# BETTER FRUIT

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Entered as second-class matter December 27, 1906,  
at the post office at Hood River, Oregon,  
under act of Congress of March 3, 1879.

**THE DESTRUCTION OF FORESTS.**—Much attention is being paid by the government to the damage being done to the United States by the lumber interests through the destruction of our forests. "The most powerful passages in President Roosevelt's message to Congress describe the terrible consequences that have followed the destruction of forests in China. The President makes it plain that the cutting away of the Chinese mountain forests has continued up to a very recent period, and that the devastation has finally led to such violence of erosion in the rainy period of the year that the soil has been washed away, and that reforestation has become impossible. It is not false or idle alarm that the President sounds and it will be criminal stupidity if we neglect any longer to adopt a forest policy based upon general principles of intelligence and patriotism."

When a journal like the Review of Reviews sees fit to express itself in such a manner it indicates that this subject should be given national consideration. This matter is of great interest to fruit communities for the reason that many fruit districts are located in mountainous countries or on side hills where forests exist, and the clearing of the forests might be a very serious matter. Every district should see that there is no wanton destruction of timber as a matter of self-protection against erosion. There is another element of consideration from the settlers' point of view and that is the beauty of the country. It seems to be a tendency of many settlers in buying a piece of land to cut down every tree and shrub so as to make every acre cultivatable. There is nothing that adds so much to the beauty of scenery and the attractiveness of the farm or the fruit district as a clump of trees here and there. Every orchardist and farmer who has a grove of natural trees will in a few years find his place worth a great deal more than that of the orchardist or farmer who has cleared every acre and has his house in the midst of a barren field or surrounded entirely by plain fruit trees.

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**A**T considerable expense, borne by "Better Fruit" entirely, we publish in this issue ten half-page illustrations of the National Apple Show, covering one principal exhibit in each section of the country. We have about thirty other cuts of the smaller exhibits and other districts, which will appear in future numbers of "Better Fruit."

**NEW ENGLAND FARM.**—The Success Magazine publishes in the January edition an article entitled, "A New England Farm." A man named Badger owned a played-out farm in New England, one from which he was barely making a living and following old-time methods of farming. This man Badger got in touch with an agricultural experiment station and learned improved methods of doing things and the method of keeping up and increasing and fertilizing the soil by proper manuring. The result was that in a very short space of time the old farm, on which he had barely made a living, was paying a good fair profit at the end of the year. We all know what has been done in the corn business. Ordinary seed corn will produce a certain yield of bushels per acre, the improved seed corn and proper cultivation will more than double the yield and the net profit. It is so in the fruit business. Some of the ordinary varieties of fruit will simply pay expenses; the right varieties, given the proper care and attention, will net a man a handsome profit every year. The whole tendency of the times is to do better work and the experiment stations stand ready to help every fruit grower and farmer who wishes to take advantage of the information they are securing.

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**WE** want to increase our subscription list for "Better Fruit" for 1909 and do it quickly. We will take four subscribers to "Better Fruit" for one year as a club for \$2.00. You can add extra subscriptions to this club at the rate of fifty cents each. Get busy. Help your neighbors and the district by getting up a club; at the same time you will help "Better Fruit," the official organ of the Northwest Fruit Growers' Association, which is doing more for the fruit industry in the Northwest than all other publications combined.

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**INCREASED PROSPERITY OF FARMER AND ORCHARDIST.**—The World's Work publishes an article upon the advancement of the farmer of today compared with the farmer of a few years ago. The sum and substance of the article is as follows: "A few years ago the farmer, when a circus came to town, came to attend the show with the whole family piled in a lumber wagon. Today it is different. The liveryman has seen the change from farm wagons to buggies, from iron tires to rubber tires and from buggies to automobiles. The editor of The World's Work on circus day noticed a number of farmers come to attend the show in an automobile."

Now fruit growers are the highest class farmers of any. They put more thought into the business and are making bigger profits and more money per acre than any other class of people engaged in tilling the soil, and in every fruit district you will find dozens of automobiles owned by fruit growers. This bespeaks a thrifty condition of affairs in the fruit-growing world and the most prosperous class of farmers are those engaged in growing fruit.

**THE NATIONAL APPLE SHOW AT SPOKANE.**—We desire to call attention editorially to the National Apple Show, held at Spokane in December, for the reason that it was of the greatest importance to the fruit industry of the Northwest, and in fact the fruit industry of the entire United States and British Columbia, as an educational show, and in an exploiting way for our fruits; and I might add that this show was of great value to the country because it showed the Eastern people, who are seeking new locations, what could be done in the way of growing fruit in the Northwest.

It seems hardly necessary to make further editorial comment. We have an article on the subject in this issue, written by Mr. August Wolf, covering every feature of the show in a thorough and able manner.

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**THE FRUIT GROWER.**—The fruit grower is certainly one of the most intelligent of farmers, and it is the duty of every fruit grower to be well posted on national affairs, as well as in his orchard business. This paper would like to take up editorially many subjects of the day, but our limited space does not permit of treating such matters very extensively. There are several publications which make a special feature of this line of work, which we believe most fruit growers would not only find interesting but instructive. Two magazines, The Review of Reviews and The World's Work, stand at the top in this line of work, and every fruit grower can secure one of these in connection with "Better Fruit" in our clubbing list, so that the expense will be very light.

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**TARIFF AGITATION.**—Most every fruit grower, and in fact the public in general, is interested over the tariff agitation. We believe the tariff ought to be intelligently and conscientiously revised and are pleased to note that the President-elect, Mr. Taft, promises such revision. The tariff should be high enough to protect the general manufacturing industry, but we certainly do not want tariffs that tend to make a few rich.

It is a fact that the consumer pays the tariff, and the public therefore wants the tariff revised. It is the duty of every fruit grower and the interest of every farmer to interest themselves in national matters. Every man should be well posted, so as to be able to vote intelligently for the community at large.



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|-------------------------------|---------|-------------------------------|--------|
| Review of Reviews.....        | \$3.00  | World's Work .....            | \$3.00 |
| Success Magazine .....        | 1.00    | Delineator .....              | 1.00   |
| "Better Fruit" .....          | 1.00    | "Better Fruit" .....          | 1.00   |
|                               | \$5.00  |                               | \$5.00 |
| All for .....                 | \$3.00  | All for .....                 | \$3.00 |
| Sunset Magazine .....         | \$1.50  | Country Life in America.....  | \$4.00 |
| Road of a Thousand Wonders..  | .75     | McClure's and Woman's Home    |        |
| "Better Fruit" .....          | 1.00    | Companion or Success .....    | 2.00   |
|                               | \$3.25  | "Better Fruit" .....          | 1.00   |
| All for .....                 | \$1.50  |                               | \$7.00 |
| Pacific Monthly .....         | \$1.50  | All for .....                 | \$4.75 |
| Oregon Journal, Semi-Weekly.. | 1.50    | Country Life in America.....  | \$4.00 |
| "Better Fruit" .....          | 1.00    | American and Success or       |        |
|                               | \$4.00  | Woman's Home Companion        | 2.00   |
| All for .....                 | \$2.00  | "Better Fruit" .....          | 1.00   |
| The Farmer (Spokane, Wash.)   | \$0.50  |                               | \$7.00 |
| "Better Fruit" .....          | 1.00    | All for .....                 | \$4.75 |
| Both .....                    | \$1.00  | Country Life in America.....  | \$4.00 |
| Breeders' Gazette .....       | \$2.00  | Review of Reviews or Outing.. | 2.50   |
| "Better Fruit" .....          | 1.00    | "Better Fruit" .....          | 1.00   |
| Both .....                    | \$2.00  |                               | \$7.50 |
| Northwest Poultry Journal.... | \$0.50  | All for .....                 | \$4.75 |
| "Better Fruit" .....          | 1.00    | Country Life in America.....  | \$4.00 |
| Both .....                    | \$1.00  | Everybody's Magazine .....    | 1.50   |
| Weekly Oregonian .....        | \$1.50  | Delineator .....              | 1.00   |
| "Better Fruit" .....          | 1.00    | "Better Fruit" .....          | 1.00   |
| Both .....                    | \$1.50  |                               | \$7.50 |
| Oregon Agriculturist .....    | .50     | All for .....                 | \$4.75 |
| "Better Fruit" .....          | 1.00    | Country Life in America.....  | \$4.00 |
| Both .....                    | \$1.00  | "Better Fruit" .....          | 1.00   |
| American Fruit and Nut        |         |                               | \$5.00 |
| Journal .....                 | .50     | Both for .....                | \$4.00 |
| "Better Fruit" .....          | 1.00    | Everybody's Magazine .....    | \$1.50 |
| Both .....                    | \$1.00  | Delineator .....              | 1.00   |
| World's Work .....            | \$3.00  | "Better Fruit" .....          | 1.00   |
| Everybody's Magazine .....    | 1.50    |                               | \$3.50 |
| Delineator .....              | 1.00    | All for .....                 | \$2.25 |
| "Better Fruit" .....          | 1.00    | Woman's Home Companion ..     | \$1.00 |
|                               | \$6.50  | "Better Fruit" .....          | 1.00   |
| All for .....                 | \$3.75  | Both for .....                | \$1.40 |
| World's Work .....            | \$3.00  | Garden Magazine .....         | \$1.00 |
| Everybody's Magazine .....    | 1.50    | Farm Journal .....            | .75    |
| "Better Fruit" .....          | 1.00    | "Better Fruit" .....          | 1.00   |
|                               | \$5.50  |                               | \$2.75 |
| All for .....                 | \$3.00  | All for .....                 | \$1.75 |
| Review of Reviews .....       | \$3.00  | Garden Magazine .....         | \$1.00 |
| McClure's .....               | 1.50    | "Better Fruit" .....          | 1.00   |
| Woman's Home Companion...     | 1.00    |                               | \$2.00 |
| "Better Fruit" .....          | 1.00    | Both for .....                | \$1.40 |
|                               | \$6.50  | Farm Journal .....            | .75    |
| All for .....                 | \$4.00  | "Better Fruit" .....          | 1.00   |
| World's Work .....            | \$3.00  | Both for .....                | \$1.25 |
| Country Life in America.....  | 4.00    | Pacific Monthly .....         | \$1.50 |
| Everybody's Magazine .....    | 1.50    | "Better Fruit" .....          | 1.00   |
| Delineator .....              | 1.00    |                               | \$2.50 |
| "Better Fruit" .....          | 1.00    | Both for .....                | \$1.75 |
|                               | \$10.50 |                               |        |
| All for .....                 | \$6.50  |                               |        |

*These clubbing rates do not apply in Canada owing to extra postage*

OUR traveling representative, C. R. Greisen, after attending the meeting of the State Horticultural Society of Oregon in Portland for one week, and one week at Spokane, where he was very much in evidence at the National Apple Show held in December, went direct to the National Fruit Growers' Congress, held at Council Bluffs, Iowa. He visited the State of Nebraska, from there going to Missouri, where he visited the Stark Nurseries, which are the largest nurseries in the United States. After traveling through Missouri he went to Colorado, and will attend the horticultural meetings in Delta. Peonia, Hotchkiss, Montrose, Grand Junction and Newcastle, and will visit various other cities. We desire to extend our thanks to Mr. Stark, of the Stark Bros. Nurseries, for the courtesies and hospitality shown to our Mr. Greisen while in Louisiana, Missouri. Mr. Griesen writes us that Mr. Stark showed him all through the nurseries, and that he was astonished, not only at the vastness of the business, but at the wonderful facilities and systematic way of doing things.

◆ ◆ ◆

THE National Apple Show was a success. Greater credit is due Mr. H. J. Neeley, manager, than any other individual connected with the affair, for the reason that he was general manager and through his efforts it turned out to be a great affair. Mr. Neeley's work was done in a thorough and able manner and the show was a success financially as well as otherwise.

Mr. David Brown was one of the active executive members connected with the show and is entitled to sincere thanks from everybody connected with the industry for his wise counsel and energetic work in behalf of the exhibition.

Mr. August Wolf, one of the paper men of Spokane, was in charge of the publicity part of the National Apple Show, and the show was well advertised and his work ably done. Great credit is due Mr. Wolf, and we take pleasure in calling the attention of our readers to the leading article in this issue, in which he has given a full account of the show.

◆ ◆ ◆

WE desire to state to the readers of "Better Fruit" that the statistical table entitled "Fruit Trees in Washington," appearing in the January edition, page 31, was compiled by F. A. Huntley, Horticultural Commissioner of the State of Washington.

◆ ◆ ◆

WE want to increase our subscriptions to "Better Fruit" for 1909 and do it quickly. We will take four new subscriptions to "Better Fruit" for a year in clubs of four for \$2.00. Get busy. Help your neighbors by giving them this opportunity, by getting up a club of four, and at the same time help "Better Fruit," the official organ of the Northwest Fruit Growers' Association.

◆ ◆ ◆

UNIVERSITY OF LONDON  
SOUTHEASTERN AGRICULTURAL COLLEGE  
County Councils of Kent and Surrey

Wye, Kent, December 15, 1908.

Better Fruit Publishing Company:

Dear Sirs—We shall be glad if you will please forward monthly until further notice the journal "Better Fruit" recommended to us by Mr. Scott of British Columbia. Yours faithfully,

W. Lewin, Assistant Secretary.



## YUCCA PALM TREE PROTECTORS

Circulars and price list free on application  
E. T. Folts, Hood River, Oregon

C. M. SHAW

Home Phone 3

ROY F. DEAN

## Electric Wiring and Supply Co.

Hood River, Oregon

## Apple and Pear Growers

We buy in America to sell in Europe.  
Payments through your home bank.  
References to Farm Shippers.

SEND YOUR ADDRESS TO THE

New York and Glasgow Fruit Co.

ALBION, NEW YORK

THE attention of our readers is called to the advertisement in this edition of cantaloupe seed. The editor has raised a great many varieties of cantaloupes for the last six years and realizes the importance of good seed. That offered by the Grand Junction Association is the best that can be secured, having been selected by the association for the use of its members, and therefore should be very desirable. We think it important to call it to the attention of our readers, because cantaloupes are being grown much more extensively throughout the Northwest and the crop comes in mighty handy to help out the grower who has planted a young orchard, because he gets returns from the crop the same season it is planted. Cantaloupes do well here and a good crop pays well and gives a man ready money. Growers who have the right kind of soil to spare and who are waiting for a young orchard to come into bearing would do well to set out a good sized patch of cantaloupes.

### GREAT NORTHERN RAILWAY COMPANY

Chicago, December 28, 1908.

Mr. W. P. Stark, President Stark Nurseries,  
Louisiana, Missouri:

My Dear Mr. Stark—I was passing the Kunze grocery store on Randolph street, this city, a few days ago, and noticed in the window some of the magnificent specimens of your famous 'Delicious' apple, that I have never seen. They were from Wenatchee, Washington. I stopped in to learn the price; they were retailing at twenty-five cents each. I thought you would be interested to know that your magnificent apple is not only 'Delicious' in name and quality, but in price as well.

Yours very truly,

E. C. Leedy,

Traveling Passenger and Immigration Agent.

### REIERSON MACHINERY CO.

General Machinery

Portland, December 17, 1908.

To the Fruit Growers of the Northwest:

Permit us to call your attention to the Pacific Power Sprayer. This outfit is specially made for the purpose. By this we mean to say that we are not using an engine or pump that is not adapted to spraying purposes simply because we happen to have that make of engine and pump and wish to sell them. On the contrary, this motor is not adapted to any other use excepting that of pumping water for domestic use or other light work, such as running a cream separator or washing machine, turning grindstones, etc., and our pump is designed and built by us in our own shops for the reason

**100 pages of most interesting information about**

# 1909 SEED CATALOGUE

**CULTURAL DIRECTIONS PREMIUM OFFERS JUST OUT—Write for it—Ask for No. 200**

**PORTLAND SEED CO**

Portland, Oregon—Spokane, Wash.

100 pages of most interesting information about  
 Flowers, Vegetables, Bulbs, Field Seeds, Grains, Grasses, Plants, Shrubs, Garden Supplies, Poultry Supplies, Fertilizers, Sprays  
 Twenty years experience in seedling the Pacific Northwest speaks to you in this our very latest

# GRASSELLI'S ARSENATE OF LEAD

## For the Destruction of the Codling Moth and All Leaf-Eating Insects, Use Grasselli's Arsenate of Lead



CODLING MOTH

Grasselli's Arsenate of Lead is manufactured only by The Grasselli Chemical Company, established 1839, General Offices, Cleveland, Ohio. When applied, ordinary rains will not wash it off. It is not injurious if applied unskillfully or in too great quantities. Grasselli's Arsenate of Lead can be used successfully against all leaf-eating insects, including the Codling Moth, Canker Worm, Elm Leaf Beetle, Potato Bug, Gypsy and Brown-tail Moth, etc. Grasselli's Bordeaux Mixture—a preventive of all fungous diseases. Grasselli's Bordeaux-Lead Arsenate Mixture—an insecticide and fungicide combined in one effective article. Write for descriptive booklet giving information how and when to spray.

## THE GRASSELLI CHEMICAL COMPANY

Main Office, CLEVELAND, OHIO

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# CHEMICALS

OF ALL KINDS

**BLUESTONE SULPHUR**

**CAUSTIC SODA**

**CYANIDE FOR FUMIGATING**

SEND FOR INTERESTING BOOKLET

**PERMANGANATE POTASSIUM  
ARSENATE LEAD FORMALDEHYDE**

**B-K-H-CO.**

**BRAUN-KNECHT-HEIMANN-CO.  
SAN FRANCISCO, CAL.**

that there is no other pump on the market today that fills the requirements of a spray pump. These requirements are small capacity and high pressure, extreme simplicity and economy, both in first cost and expense of operation.

This sprayer is so low in price that even the small fruit grower can afford it; so light that one horse can handle it either on a truck or a sled, and has just as large capacity for spraying as the largest power outfit.

The demand for such an outfit as this is just as large as the fruit growing industry of the Northwest. Every man that raises fruit must spray.

It is not the customer you want; it is the proper outfit to sell him; the outfit he can afford to buy and afford to use after he has it.

The Pacific is such an outfit, and the only complete outfit, at less than five times its weight and twice its cost.

We want to sell these outfits through the dealer, and in order to do so make the trade the right price, while at the same time he is able to make the right price to the user.

Show this circular to some of the fruit growers of your section, talk with them about it, and then write us for prices.

Very truly yours,

Reierson Machinery Company.

◆ ◆ ◆  
THE NATIONAL FRUIT AND BERRY  
BOX COMPANY  
Manufacturers of Sanitary Paraffined Paper  
Fruit and Berry Boxes

Tol-do, Ohio.

*Better Fruit Publishing Company:*

Dear Sirs—Our box has much merit, being very easily put together, absolutely water and juice proof, and with absolutely no loss in putting together.

The growers at Council Bluffs were very much pleased with it, and I came home with an order for one half million boxes. We are going to push this box very thoroughly and will appreciate any co-operation on your part. We want you to feel that you will have no hesitancy whatever in recommending same to your friends and acquaintances. Yours very truly,

The National Fruit and Berry Box Company.  
Per C. O. Miniger, Secretary.

◆ ◆ ◆

Club of Four, \$2.00

Send in four new subscribers and \$2.00 and we will send "Better Fruit" to each subscriber for one year.

If your subscription expires this month, if you get up a club of four we will renew your subscription for fifty cents.

**SEEDS** The best that money can buy.

**TREES** Straight, clean and true to name.

**PLANTS** and roots of all description, ornamental and vegetable.

**SPRAYS** for winter and summer, put up in the most convenient form.

**PUMPS** The best barrel pump sold. See our "Empire King" before you buy.

**PACIFIC  
SEED CO.**

201 Front St. S.W. Cor. Taylor

Portland, Oregon

CATALOGUE FREE

WRITE US BEFORE YOU BUY

**WE MAKE  
Labels  
of every description**

WE CARRY IN STOCK  
LABELS FOR APPLE,  
PRUNE & CHERRY BOXES,  
BERRY CRATES, ETC.

*Write Nearest Office for  
Samples and Prices.*

**SCHMIDT  
LITHOGRAPH CO.**

ESTABLISHED 1873

408 WELLS FARGO BLDG.  
PORTLAND, ORE.

455 EMPIRE BLDG.  
SEATTLE, WASH.

2ND. & BRYANT STS.  
SAN FRANCISCO, CAL.

111 HENNE BLDG.  
LOS ANGELES, CAL.



## CONDITIONS OF APPLE MARKETS IN EUROPE

VICE-CONSUL of Manchester, John W. Thomas, calls the attention of growers and exporters of American apples to the opportunities of that British market:

It cannot be too widely known that within a given area this district is the most thickly populated in the United Kingdom, and that this population, on the average, spends much more money on foreign produce of all kinds than any other community in Great Britain.

Spanish fruit shippers are well aware of these facts, and the importation of fruit from Spain into Manchester has been almost doubled within the past few years.

Last season 72,500 barrels of apples were imported direct from the United States and Canada to this port. The local demand here is sufficient to absorb three times this quantity, while the large inland manufacturing towns would also take a good proportion if the fruit came direct to Manchester.

One of the largest importers of apples in this city recommends growers who may contemplate shipping to Manchester, to put up their fruit in standardized barrels, and to bear in mind that apples for export must be pressed quite tight to insure safe carriage.

It is also essential that the fruit be properly graded and that nothing lower than good No. 2 quality be shipped, as common and inferior fruit is not wanted and will not pay to ship at any time. Good, clean, large sized apples, and especially red varieties, are always certain to sell well in this market.

#### Freight Rates—Good Demand for Apples

The ocean freights to Manchester from the following ports during last season were as follows: New York, 2s. (48 cents) per barrel; Boston, 2s. 1½d. (51 cents) per barrel. The rates for the season 1908-9 have not yet been fixed. There are regular sailings from New York and Boston to this port throughout the year.

At the present time (August 27) English markets are fairly well supplied with home grown apples, but there is no doubt that beginning with the middle of September this country will require large quantities from the United States.

It is anticipated that shipments across the Atlantic will be fairly large early in the season this time, as, in view of the heavy losses suffered on stored apples last year, growers and dealers will prefer to realize promptly this winter, and more especially as the Western and Middle States will now have plenty of apples.

High prices, therefore, cannot be expected for some time to come, but I am assured that there will be a good, steady demand for best and medium qualities of apples on this side, and as prices in producing districts seem likely to rule low, it should pay to export to this country, and Manchester in particular.

Certain large fruit brokers and importers in this city (names on file at Bureau of Manufactures) conduct public auction sales in the season several days each week. The results obtained in this market in the past have been very satisfactory when compared with those obtained elsewhere, and during the coming season more growers and shippers of American apples should avail themselves of the advantages the port of Manchester offers for the disposal of their fruit.



IN reporting that an opportunity is now afforded to American exporters for the sale of apples at Bergen and other towns on the west coast of Norway, Consul Felix S. S. Johnson writes:

The very warm weather which has been experienced this summer in western Norway has not been without a few drawbacks in some districts. In Sogn especially, a district from which a great supply of fruit, such as apples and pears, comes, the yield will be smaller than

## SELECTED CANTALOUPE SEED

The Grand Junction Fruit Growers' Association has on hand 800 lbs. of Selected Solid Netted Gem Cantaloupe Seed, Price \$1.50 per lb. 50 to 100 lbs. lots \$1.25

This seed has been especially selected for the use of members of our Association but there is an excess of 800 lbs. over their wants which we now offer for sale

ADDRESS

**Grand Junction  
Fruit Growers Union**

Grand Junction, Colorado

usual on account of the ravages of insects which attacked the crops. So severe has this been that an official from the agricultural department was specially sent to investigate the damage done. In a communication to a newspaper this official remarks: "It is quite terrible the way in which the apple trees in this district have suffered; most of the orchards look quite deplorable." Their proprietors are coming to him for help and advice.

Though many districts are affected, Hardanger has escaped better than its neighbors. The berry crop is excellent, and it is hoped that this will help to compensate for the loss of the apples and pears. It would be well worth the while of American exporters to correspond with the largest importer of apples at Bergen (name obtainable from the Bureau of Manufactures) regarding contracts for the coming winter.



QUALITY FRUIT RANCH.

Palisade, Colorado.

Better Fruit Publishing Company:

Dear Sirs—I write to show my appreciation of the last number of "Better Fruit." I am among the first subscribers at this place and as I am engaged in fruit growing every number is very interesting. The offer you made for new subscribers should swell your list enormously. I just happened to mention it today in one of the real estate offices in town and in less than a minute a club was formed. I was much interested in the tabulated statement of the fruit acreage of Washington State and it would be of much interest to me and others if a list of acreage in fruit in Oregon, Idaho and, in fact, of the entire Northwest could be accurately published. The article on "Poisoning" was timely. I have lost several trees from it. Well, excuse me for this long letter. Long live "Better Fruit." May its shadow never grow less. Yours truly, Jerome Eyer.

## DON'T KILL THE GOOSE.

What will you do when your land is impoverished, run down, diseased and fit for nothing?

## HUSBAND THE WEALTH THAT IS YOURS

By applying Fertilizer in season and NOW. ~~ONLY~~ Fertilizers have a guaranteed analysis. State what you need the Fertilizer for and we will make up what is best suited. We have special machinery for doing this and can furnish every variety of Fertilizer, both prepared and in the raw material. Our crop book tells all about Fertilizing—sent free on request.

**LILLY'S  
BEST**  
SOLD BY  
DEALERS

**THE CHAS. H. LILLY CO.**  
SEATTLE PORTLAND

**FERTILIZERS**



## WINTER COURSES IN AGRICULTURE A SUCCESS

WINTER courses in agriculture have become an important factor in the agricultural development of the nation. The attendance at these courses at the various agricultural colleges of the country probably exceeds in number those students taking regular courses of instruction, and they are undoubtedly doing more for the immediate development of agriculture than the regular long courses. The farmers taking these courses have reached mature years; they own their own farms, most of them, and they are able to put into practice at once any new idea that they may get at the college.

Agricultural methods and practices are rapidly changing as a result of the great amount of hard, earnest work that is being done at the experiment stations of the country. A little discovery is sometimes worth millions of dollars, and the prosperous farmer is the first to put in practice new and better methods.

Alfalfa has added millions of dollars to the agricultural wealth of the country in the past few years, and this has been brought about largely by agricultural college men who investigated and proclaimed its possibilities.

A discovery of an agricultural college man made it possible to discover the robber cow and to put dairying on a profitable basis.

Improvement in seeds by selection or breeding has added immensely to the value of the field crops of the United States. A day at the winter course will show how it is done.

Today we would be without fruit in this country but for the discoveries that have been made as a result of long and expensive work at the agricultural colleges and experiment stations. Instead of being helpless against the ravages of insect pests the farmer is master of the situation, and we continue to eat fruit.

But for our better knowledge of animal diseases and their prevention, we would be unable to produce animal products at a profit.

The improvements that have been made in methods of soil treatment and animal breeding and feeding with a view to increased crop and animal production have been revolutionary.

About a hundred million dollars have been added to the wealth of the nation annually through work at the experiment stations in developing the beet sugar industry.

And all this is just a beginning. The work of improvement must go on, for the perpetuity of the nation depends largely upon the ability of our farmers to increase the productiveness of the farms.

The winter course is helping solve the problem of how to improve conditions in rural communities, which President Roosevelt's Country Life Commission is wrestling with. When farmers return to their homes from such a meeting at the college, carrying with them the inspiration and information received, it means an uplift in their community.

J. DRYDEN.

Corvallis, Oregon, December 14, 1908.

culating libraries, home reading courses, winter courses and free bulletins are all features of a comprehensive system of extension work that the Agricultural College faculty has recommended to President Roosevelt's uplift commission.

◆ ◆ ◆

Messrs. Stark Brothers N. & O. Co.,  
Louisiana, Missouri:

My Dear Sirs—Your kind letter of December 5 is received, and in reply will say that the only mistake I made in planting your Delicious Apple was in not planting at least one thousand trees. They are better than you ever claimed them to be—the finest eating apple that man or woman ever put in their mouths. Everyone who has had the privilege of eating Delicious has invariably wanted more. I could have sold one thousand boxes of them this year at or above fancy prices, and in my judgment the market will never be overstocked with your leader of the world—the Delicious Apple. My trees were set nine years ago and have borne apples for the past three years. The trees when planted were one-year-old budded about two feet tall. I planted, at your suggestion, 1,250 one-year-old budded trees of Black Ben, Senator, Delicious and Grimes Golden, all of which have borne crops for three years and all are true to name.

In the past thirty-three years I have planted for myself ten thousand apple trees, and all are true to name with the exception of about three hundred trees which I bought of the — Nursery. They were to have been Grimes Golden, but proved to be —, which are only fit for cider. I have planted about three thousand of your trees and all have come true to name in every instance, not one tree grew fruit which I did not order.

Now, as to Delicious. There is none better that grows; simply perfect—you have found it. The tree is a splendid grower, very fine wood and shapely head. Tree has at this time, December 10, 1908, its foliage hanging equal to Missouri Pippin, while all others are defoliated entirely or nearly so. Truly yours,

Henry C. Cupp, Adams Co., Illinois,  
(First President Apple Growers' Congress.)

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THE GRAND JUNCTION FRUIT GROWERS' ASSOCIATION

Grand Junction, Colorado, January 4, 1909.

Mr. E. H. Shepard, Hood River, Oregon:

Dear Sir—Pleased to acknowledge your favor of the 31st.

Now, as to what I think of Elberta peaches. I think they are the best thing on earth to plant, provided your climate is all right. I suppose ninety per cent of the peaches that have been set out in western Colorado during the last five years have been Elbertas. They are good lookers and carry better than any other freestone peach and stand up better on arrival; in fact, after they are

beginning to soften up they will still stand up without rotting down for several days.

There is just one other peach that we have had equally as good success with as Elbertas, and that is the Orange Cling. These are grown here in a very limited way, but two years ago I had out two or three cars and we realized just as much for them as Elbertas, and one advantage of these Orange Clings is they come in just a little later than the Elbertas, and in that way a man can plant the two kinds and would, therefore, not be crowded so heavy on any one variety at picking time. I am also informed that they are the most profitable peach that can be grown for canning or drying purposes.

I want to congratulate you, Mr. Shepard, on the very able manner in which you are conducting your publication of "Better Fruit." It seems to me you have had phenomenal success, but you deserve it, for I believe you are publishing the best fruit journal in the United States.

Yours truly,

The Grand Junction Fruit Growers' Association,  
By J. F. Moore.

## RAISING POULTRY?

Then our booklet "\$2.00 per Hen" will surely interest you. You will also be interested in

**LILLY'S  
BEST**

## POULTRY FOODS AND REMEDIES

all of which are sold by dealers and fully described in our Catalog, which will be sent free together with the above booklet to anyone interested in Poultry.

**THE CHAS. H. LILLY CO.**

"THE BIG SEED HOUSE"

SEATTLE

PORTLAND

## First Cost the Only Cost

Look to the future when you buy your wagon and buy it once for all. For the same money you would pay for a good wooden wagon you can get

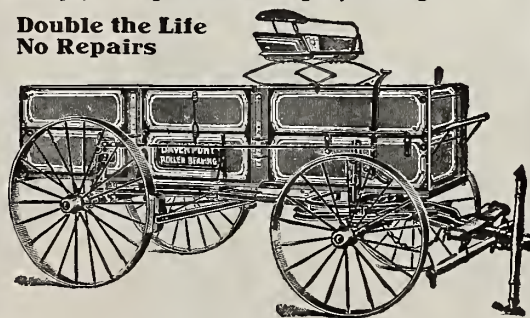
**Double the Strength  
No Breakdowns**

**Double the Life  
No Repairs**

By buying the

**Davenport  
Roller-Bearing  
Steel Wagon**

It is practically all steel-trussed steel wheels, steel gears, steel hubs like the modern automobile—nothing to dry apart or get loose.



## The Roller-Bearings

Make 30% to 50% Lighter Draft

This is the greatest advance ever made in wagon building. They are dust, sand and water-proof. Need oiling only occasionally, oil without removing wheels.

Don't buy a wagon till you know all about the Davenport Roller-Bearing Steel Wagon. Let us show you why it's the only wagon you can afford to buy. Send for free Catalog y and do it today, before you forget.

**Davenport Wagon Company, Davenport, Iowa**

THE winter course is a part of a general scheme of agricultural extension which the Agricultural College faculty is working for. Traveling agricultural and domestic science schools, farmers' institutes, demonstration trains, free cir-



## ABSTRACT OF ADDRESS DELIVERED BEFORE WASHINGTON FRUIT GROWERS ASSOCIATION

**I**N OPENING Professor Craig congratulated the fruit growers of the Pacific on two things. First, the magnificent display of apples, illustrating the pomological possibilities of the different regions of the Pacific Northwest and second the hearty way in which the city of Spokane had co-operated with this enterprise by appropriately dressing shop windows, by adding special city attractions, so that the whole affair presented the co-operative type of effort rather than any enterprise by a single element or faction. This typified what the speaker called the characteristic spirit of the West.

The speaker took occasion to congratulate the fruit growers of Washington and Oregon in having in the horticulturists of their respective Agricultural Colleges two young men in Professors Thornber and Lewis who represented the aggressive, intelligent, up-to-date teachers and investigators. He had had the privilege of having these young men in his classes at Cornell University, and therefore was in a position to know their true ability.

In speaking of the fruit growing of Europe as compared with that of the United States, Professor Craig said there was no true basis of comparison, for the systems were totally unlike. On the continent of Europe and in Great Britain there were practically no commercial orchards or areas given up to the growing of great tracts of single classes of fruits as in America, but on the other hand the amateur type of gardening, in which many classes of fruits enter, prevailed almost universally. The German Government was studying American methods most assiduously. They were teaching American methods in their colleges of agriculture and they were urging upon the soil tillers the advantages of cultivating

fewer varieties in larger quantities; but the German farmer was slow in changing his methods and the speaker did not look for any radical change of system of fruit growing in Europe in the near future. The trained fruit tree, the dwarfed fruit tree, were likely to prevail. This meant that a small product, catering to a limited, high-class market, would continue to be the rule; therefore the European market outlook for the American fruit grower was as bright today and would likely be as bright ten years hence as it had ever been. But grading must be carefully done and all insect-infested fruit left at home. Germany is on the lookout for San Jose scale.

There were those who thought our production would likely reach and pass our consumption, but statistics of fruit production for the past ten years gave no indication or little evidence to fear such result. The apple crop of 1908 was smaller than the average apple crop for the ten years preceding, and the average crop of that decade was not more than one-half the amount of the great apple crop of 1896. At the present time it appeared that the increased consumption was more than caring for the increased output.

The speaker laid emphasis upon what he regarded as a fact, that quality was less important in European markets than grade. The fruit of medium quality, carefully graded, would sell at higher figures than another variety of high quality but poorly graded. He was able to compliment the growers of the Pacific Coast in regard to the character of the pack, and said that they were showing valuable object lessons to the fruit growing public in the way in which their apples were graded and boxed.

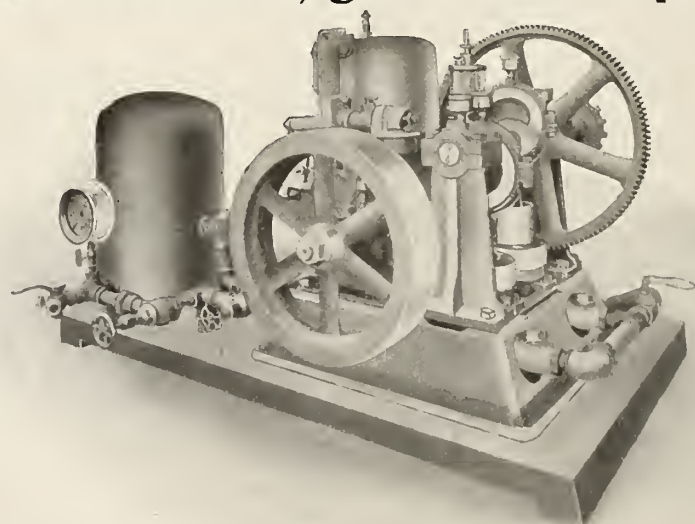
The present system of sale and distribution of apples in European markets is not conducive to the highest possible returns. It is not difficult for buyers to get together in advance of a sale and effect an agreement covering the price to be paid. He advocated the establishment of American agencies for the handling of American fruit in the leading receiving ports and distributing centers of Europe. The cities in the interior are badly supplied, while often the ports of entry are subject to gluts and oversupply. The box package encouraged careful grading, while the barrel encouraged carelessness and dishonesty.

◆ ◆ ◆

**T**HE annual seed catalogue of The Chas. H. Lilly Company is now being distributed throughout the entire Western country and is exciting much widespread interest. It is larger this year than ever before, containing one hundred and twenty pages, sixteen of which are devoted to poultry and stock foods, sixteen pages to roses and plants, sixteen pages to flower seeds, and the remaining seventy pages to farm, field and grass seeds, sprays, implements, fertilizers and cultural directions. It is a book brimming over with interesting facts and figures and is really a necessity for building up a successful business in farming or poultry raising. An interesting feature of this catalogue is the neatness of the type matter and the perfect arrangement of details. Everything is easy to find, alphabetically arranged, and the headings and names of articles very distinct. The Chas. H. Lilly Company are naturally very anxious for readers of this paper to get a copy of the catalogue. It will be sent to any one free, on request. Write for a copy to The Chas. H. Lilly Company, at either Seattle or Portland.



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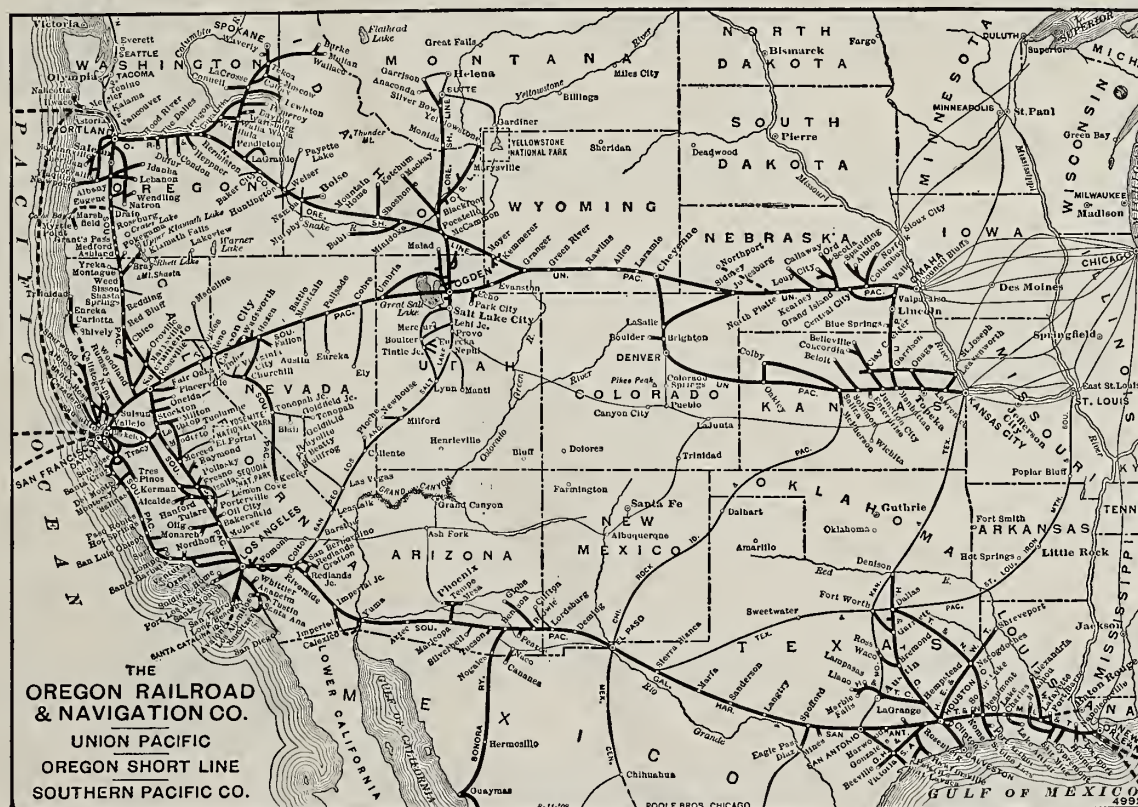
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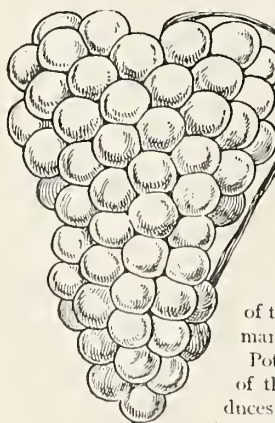


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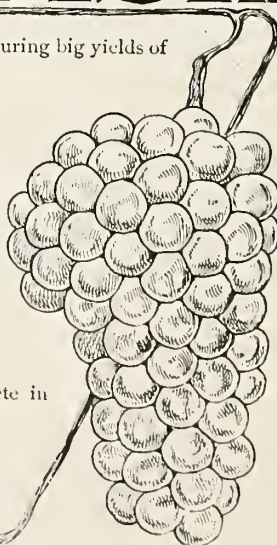
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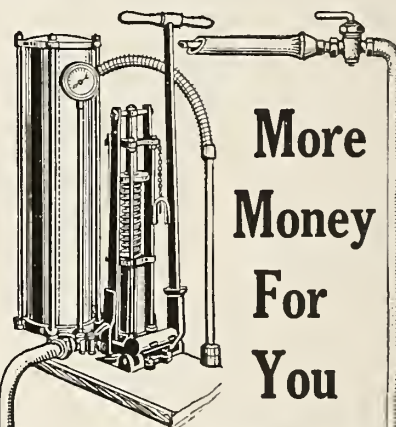
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## UTAH AGRICULTURAL COLLEGE EXPERIMENT STATION

Logan, Utah, December 29, 1908.

Mr. William P. Stark, Louisiana, Mo.:

Dear Mr. Stark—Your letter of the 21st inst., asking my opinion about the Early Elberta peach, is duly received.

Some time last summer I visited the orchard and nursery of Dr. Gleason at Kaysville, Utah, and saw in his orchard the Early Elberta and Elberta peaches growing side by side. At the time of my visit the Early Elberta was ripe and just in its prime, while Elberta was still hard and green. I would judge that it would be fully two weeks before the Elberta would have been of an equal degree of ripeness.

I brought home with me several specimens of the fruit of Early Elberta, in order to try their keeping quality. The fruit was placed on a shelf in the office, where they were exposed to the light and summer heat. The fruit lay there on the shelf for fully two weeks, in as good condition as when picked from the tree. After this time they began to wither up, but were still in a condition fit to eat two weeks later, or a month after they were picked from the tree. Only two of the dozen or more fruits I had, showed any signs of rotting, and these two fruits were nibbled by mice. The remainder of the fruits dried up and

some of them are still on the shelf—just a bit of gummy pulp around the stone.

The habit of the Early Elberta appeared to me to be practically identical with the original Elberta. The fruit in external appearance is just the same, but in texture I believe the Early Elberta has a little finer grain and not quite so much "rag." It is juicy and sweet and with bright yellow flesh and a free stone. Its skin is thin but strong and is not too fuzzy.

I believe the Early Elberta is one of the best varieties which has been introduced since the first Elberta came. It will, no doubt, play an important part in sections such as we have here in Utah, where growers do not want to get too many varieties which are too much unlike in appearance, but where they must have early and late kinds. In Early Elberta one has all of the good qualities of the Elberta, and the additional feature of early ripening. When this fact is taken into consideration, and when it is planted along with the original Elberta, much of the strain and congestion which comes with the peach harvest will be reduced. The shipping season will be lengthened.

I shall take pleasure in saying a good word for Early Elberta wherever and whenever I can, and I hope that you and Dr. Gleason will find that this peach is one of the best sellers and one of the best fruits of any of your recent introductions.

With the compliments of the season and kindest regards, I am, Very truly yours,

E. H. Favor, Assistant Horticulturist.

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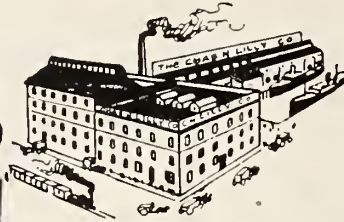
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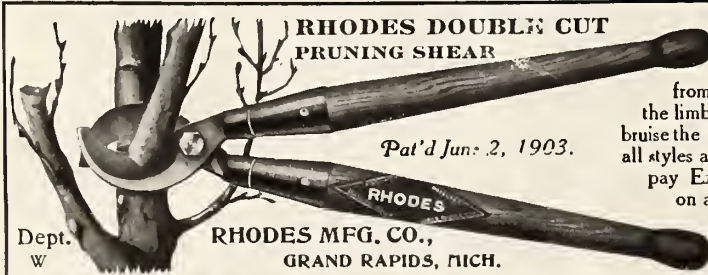
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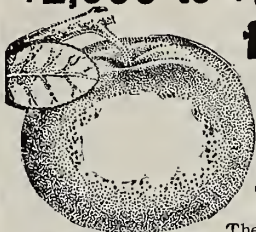
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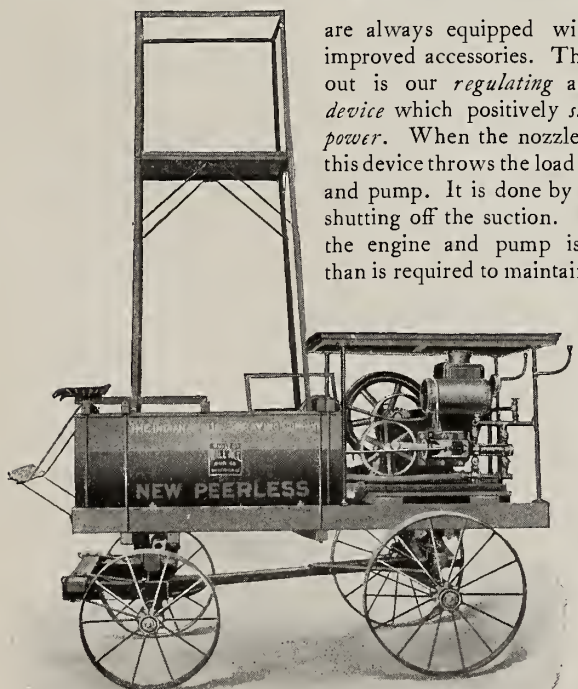
HOOD RIVER, OREGON

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Where the shipping facilities are second to none in the entire Northwest.  
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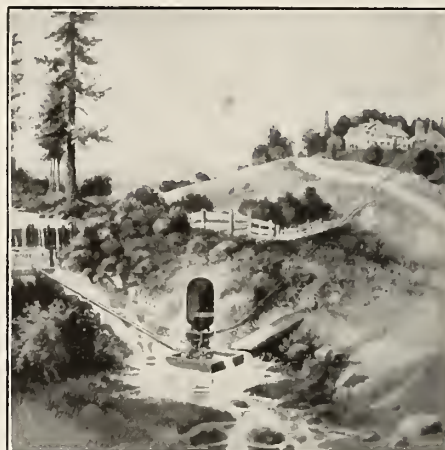
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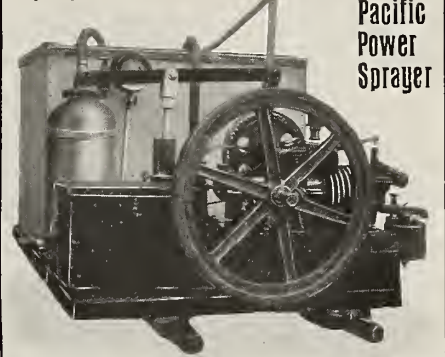
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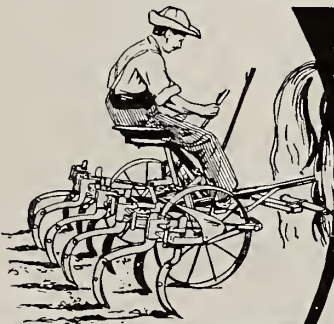
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We carry stock in San Francisco. Agencies in all principal Pacific Coast  
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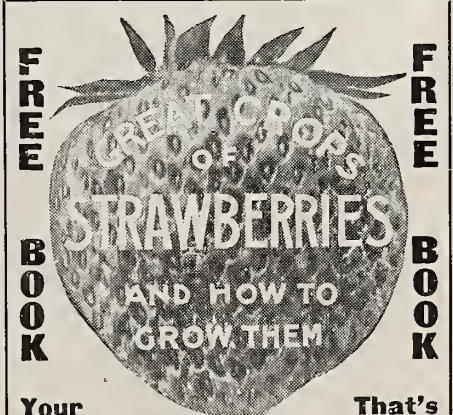
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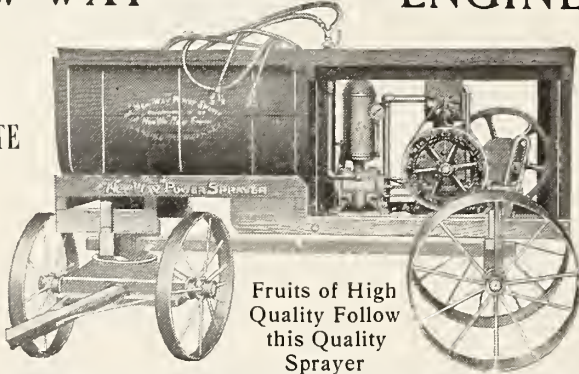
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Carries high pressure without the usual vibration or strain, and is the most practical, durable and economical machine ever built for spraying. Use your own running gear if you prefer. Write us today for Spray Catalogue No. S-8



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Patented Nov. 17, 1903.

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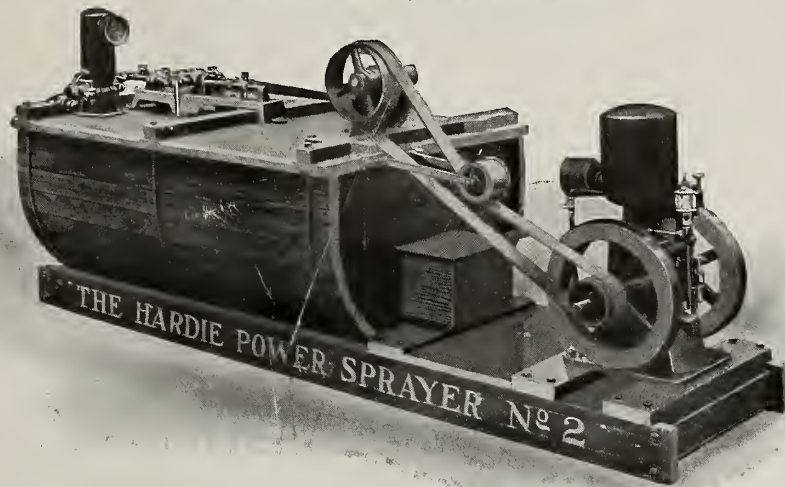
The National Fruit & Berry Box Co. TOLEDO, OHIO



# The "Hardie" Sprayers

PORTLAND, OREGON

*Nothing  
to  
Watch  
but the  
Spray*



*The  
Sprayers  
with the  
Trouble  
left out*

**WEIGHT 700 POUNDS**

**LENGTH 8 FEET**

**PRICE \$200**

The IDEAL machine for small orchards or where the land is hilly. This machine is equipped with everything to make it practical and convenient—Nozzle Protector, Relief Valve, Belt Tightener, Pressure Gauge, **All-Brass Pump** which is easy to repack; has Brass Ball Valves so arranged that they can be easily got at, Swinging Agitator, etc., etc. The engine is designed especially for the sprayer, is light, strong and compact; cools with two gallons of water. **EASY TO START, EASY TO OPERATE.** This machine will maintain a pressure of 150 pounds, discharging about 250 gallons per hour.

**Gasoline Engines  
Spray Hose, Spray Rod  
Spray Nozzles  
Spray Tanks  
Hand Pumps of Every  
Description**

## The "Hardie" Triplex Power Sprayer

Is made in two sizes, A and B. Triplex A has 2½-inch plungers with 2¾-inch stroke, and has a capacity of eight to ten gallons of liquid per minute under a pressure of 200 pounds. It is driven by our 3-horsepower engine. This engine is connected to the pump by a sprocket chain. The tension on the chain is controlled by a chain tightener and the speed reduced by gearing on the engine. The size of the suction and discharge, the size of valves, plungers and air chamber, and the strength of crank shaft, plunger rods, base and frame are such as to render it safe to work under very high pressure and give the machine very large capacity.

**TRIPLEX B** has the same construction, except that it is belt driven and has 2-inch plungers and 2¾-inch stroke, and may be operated by our 1½-horsepower engine, giving a capacity of four gallons per minute at 200 pounds. When driven with our 3-horsepower engine a pressure of 200 pounds is easily maintained, giving a capacity of seven gallons per minute.

Both outfits are equipped with everything to make them complete. The best grade of hose, with our special heavy brass couplings; nozzles of any pattern, aluminum-lined bamboo rods, rubber drip guards, "Leakless" stopcocks, tools, tool box, large brass funnel for straining liquids, pressure gauge, etc., etc.

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A Hardie Sprayer is a sort of crop insurance policy. Its cost is returned many times the first year by larger crops of perfect fruit.

Its construction is so simple that a child can run it; so strong that it will last for years; so perfectly built that pleased customers have called it "**The Sprayer with the trouble left out.**"

These and twenty other styles of Sprayers are built in our own factories at Portland, Oregon, and Hudson, Michigan.

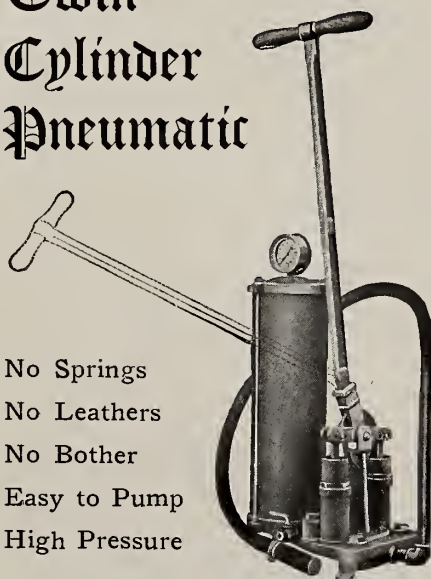
Our catalogue tells all about them. Send for it today.

## THE HARDIE MFG. CO.

Hudson, Michigan

22 Front Street, Portland, Oregon

## Twin Cylinder Pneumatic



**No Springs  
No Leathers  
No Bother  
Easy to Pump  
High Pressure**



# White Salmon Valley

## WASHINGTON

*Across the Columbia River from HOOD RIVER VALLEY, OREGON  
in The Banner Apple Belt of the World*



*The City of White Salmon, at the entrance of the White Salmon Valley, showing the North Bank Railroad and the Columbia River*

The WHITE SALMON VALLEY today presents OPPORTUNITIES FOR INVESTMENT beyond that of any other FRUIT REGION in the Northwest. It is the north half of a LARGER VALLEY lying between Mount Adams on the north and Mount Hood on the south. The mighty Columbia flows between and divides this valley. From the Columbia River to Mount Hood forms the Hood River Valley, and from the Columbia River to Mount Adams forms the White Salmon Valley. Both these mountains are snowclad all the year and influence the climatic conditions. This, together with a volcanic ash soil, produces apples that are superior to all others in the world in FLAVOR, SIZE, COLOR, and, most important of all, KEEPING AND SHIPPING QUALITIES.

Ninety per cent of the fruit grown in this valley is exported, bringing the highest market prices.

THE CLIMATE of this region is ideal. It is located in the midst of the CASCADES, with a pure mountain air and free from excessive rains or drought. The snow-covered peaks at either end of the valley temper the heat of summer and make the summer nights cool and invigorating. The winters are as a rule mild and short. The scenery is as fine as may be found anywhere on the continent.

The valley has been held back heretofore through lack of railroad transportation, but the SPOKANE, PORTLAND & SEATTLE RAILROAD, part of the Hill system, now in operation, gives this valley the best of shipping facilities.

NOW IS THE TIME TO SECURE A CHOICE ORCHARD TRACT AT A LOW FIGURE. Write today for particulars of this wonderful valley to the

**White Salmon Valley Development League**  
WHITE SALMON, WASHINGTON



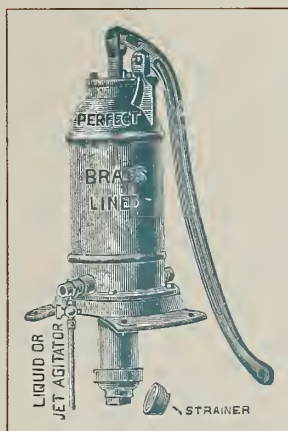


FIGURE 653



FIGURE 544

# THE MONEY-MAKING CAPACITY OF A TREE

*Can be greatly increased by the judicious use of a*  
**MYERS SPRAY PUMP**

It is the pump that is best adapted for the use of the orchardist. There is no bulky weight to the Myers. It is a durable, clean cut line of spray pumps, no heavier or lighter than necessary. They are capable of raising and maintaining any desired pressure with but half the exertion required to raise the same pressure on any other line of pumps. If there were no other reasons why you should buy a Myers, these should be sufficient to induce you to make the right selection, but there are many other reasons, the most of them are given in our new Fruit Growers Catalogue which illustrates and describes the most complete line of spray pumps on the market, including our famous Mitchell Power Spray Outfit

SEND FOR IT

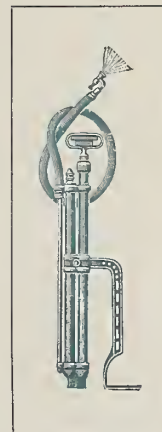


FIGURE 19639

**IMPLEMENTS  
 AND  
 VEHICLES**



**PORTLAND**  
 Oregon  
**SPOKANE**  
 Washington  
**BOISE**  
 Idaho  
**SALEM**  
 Oregon

# Profit by Experience!

*Members of the Produce Reporter Co. are better equipped to do successful selling or consigning business than non-members*

Organization is the keynote of success in this hustling day. Organization — national — of produce and fruit dealers is peculiarly necessary. It is an adaptation of the *local* idea. It is proportionately profitable. No shipper can afford to deprive himself of the co-operative service so easily to be obtained. Let the Managers tell you all about it.

**PRODUCE REPORTER COMPANY**

34 SOUTH CLARK STREET

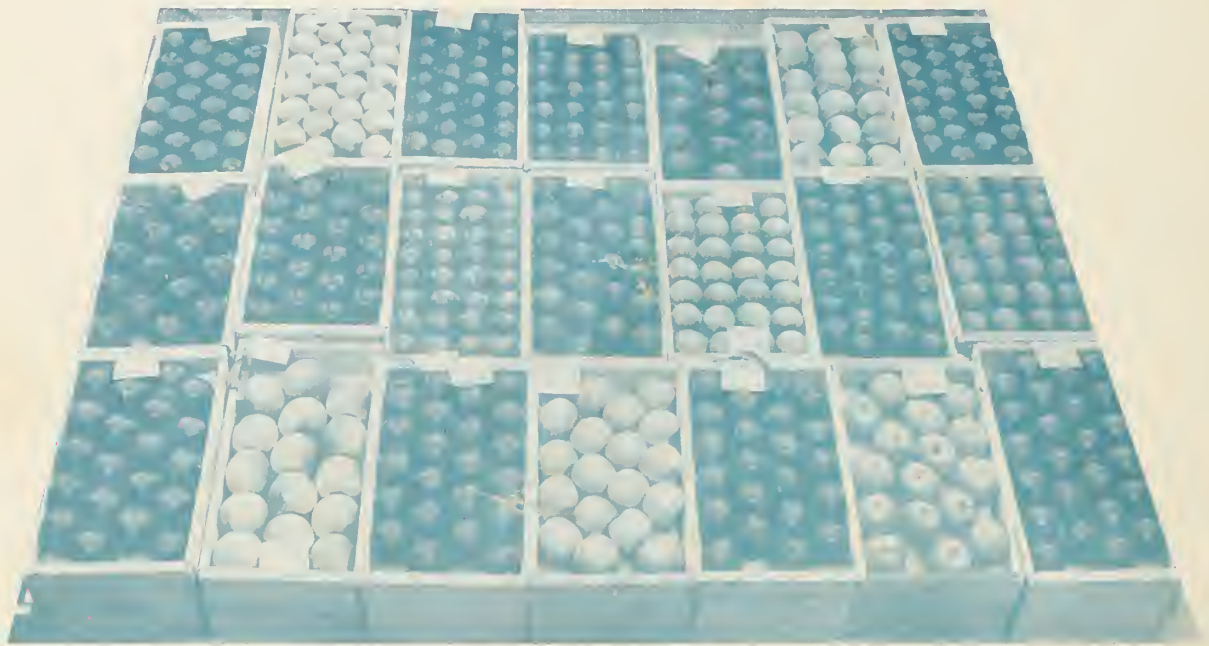
CHICAGO, ILLINOIS



# HOOD RIVER

## OREGON

*Greatest Apple Growing Valley in the World*



HOOD RIVER'S FAMOUS PACK

Where fruit pays from \$500 to \$1500 per acre and is marketed for you at the highest prices paid anywhere in the world, while still on the tree. Forty thousand acres of finest apple land still undeveloped. One hundred thousand horsepower going to waste in its streams. Population, 6000; value fruit products, 1907, \$400,000; value lumber output, 1907, \$750,000; taxable property, \$2,700,000; bank deposits, 1901, \$36,000; 1907, \$690,494.31. Railroad and water transportation. Two hours from Portland, twelve hours from Seattle and Spokane. Rural mail delivery. Phone service covering city and valley. Let us tell you about it.

---

DO IT NOW—TO-DAY

---

ADDRESS

Publicity Committee Hood River Commercial Club

HOOD RIVER, OREGON